

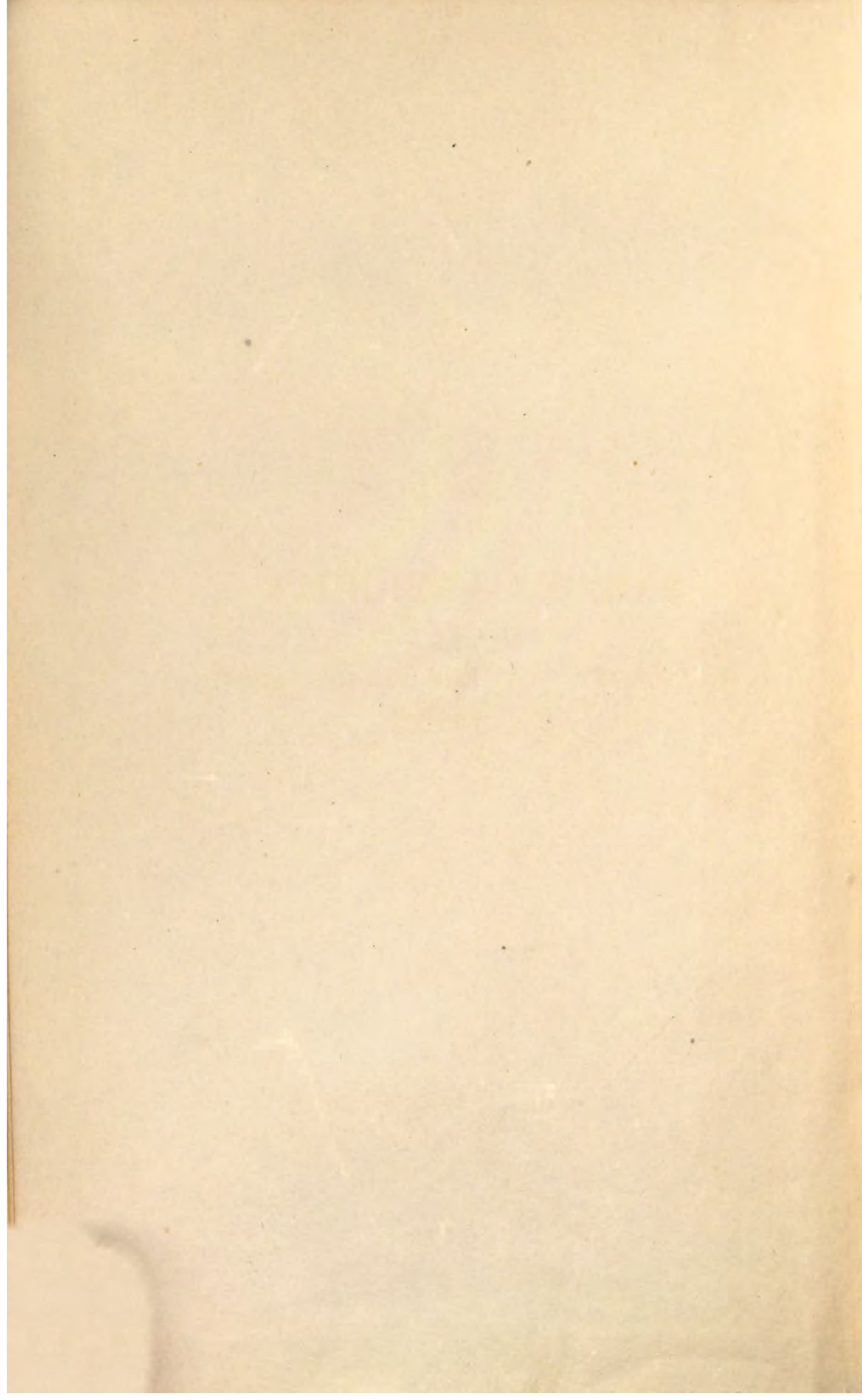
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ARTS & CRAFTS

OF THE
MUSEUM OF ARTS AND CRAFTS
IN LONDON



THE
EARTH'S ANTIQUITY
IN HARMONY WITH THE MOSAIC RECORD
OF CREATION.

IN HARMONY WITH THE MOSAIC RECORD
OF CREATION.

THE

BARTON'S ANTIQUITY

IN CONNECTION WITH THE GREAT RECORD
OF CHURCHES

THE
EARTH'S ANTIQUITY

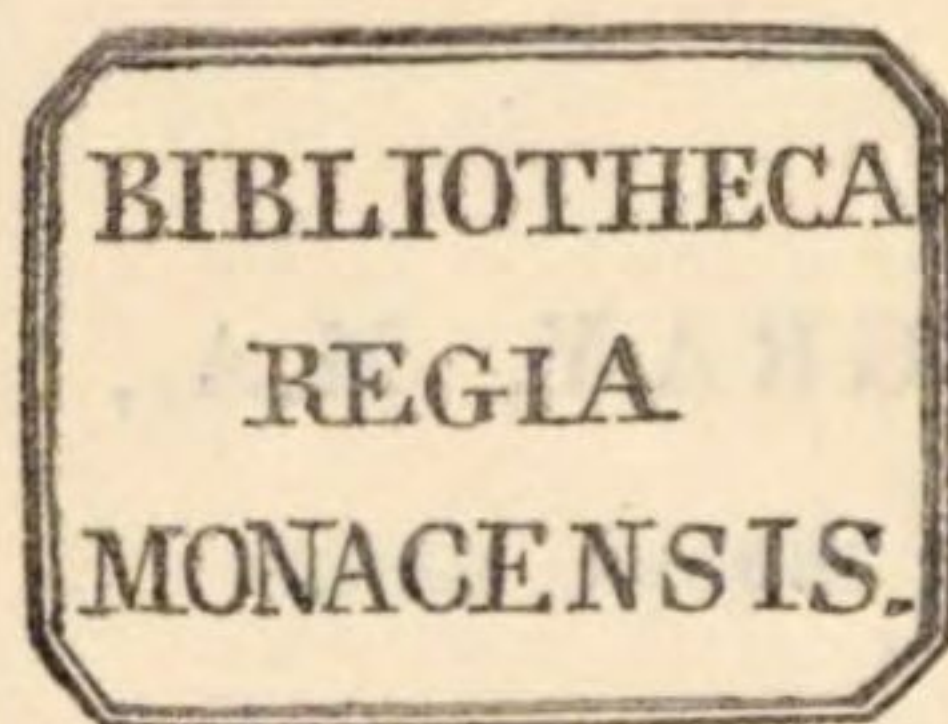
IN HARMONY WITH THE
MOSAIC RECORD OF CREATION.

BY
JAMES GRAY, M.A.,
RECTOR OF DIBDEN, HANTS.

It is for our common advantage to conciliate the finger
and the tongue of God, His Works and His Word.—KEPLER.

LONDON:
JOHN W. PARKER WEST STRAND.

M.DCCC.XLIX.



TO
SIR ROBERT HARRY INGLIS, BART.,

M.P. FOR THE UNIVERSITY OF OXFORD,

IN WHOSE PUBLIC COURSE
THE UNION OF RELIGION WITH PHILOSOPHY
HAS EVER BEEN CONSISTENTLY SUSTAINED,

THIS ATTEMPT
TO MANIFEST THE ACCORDANCE BETWEEN THE WORD
AND THE WORKS OF GOD

IN RELATION TO
THE EARTH'S ANTIQUITY,

IS WITH HIGH RESPECT AND ADMIRATION

DEDICATED,

BY ONE OF HIS GRATEFUL CONSTITUENTS.

DIBDEN PARSONAGE,

Feb. 6, 1849.

TO

SIR ROBERT HARRY INGLES, Bart.

OF THE UNIVERSITY OF OXFORD

IN WHICH IT IS SHOWN

THE STATE OF THE UNIVERSITY OF OXFORD

IN THE YEAR 1714

THE STATE

OF THE UNIVERSITY OF OXFORD

IN THE YEAR 1714

IN THE YEAR 1714

THE STATE OF THE UNIVERSITY

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Principles of the Law of Nations

PREFACE.

A REASON for offering to public notice a new book is generally required, and the occasion of this present addition to the already burdened store is soon told. The following attempt to trace, in a popular manner, the harmony between Nature and Scripture in their revelations concerning the periods of the Creation, owes its origin to some anxious considerations, induced by certain startling statements made at a late Meeting of the British Association, respecting the Earth's vast Antiquity. Search was, in consequence, made for some Treatise which specifically might elucidate, in consistency with the Divine Revelation, the facts of an Archaic Earth; but no such Work being found, a personal investigation of the subject was undertaken. This happily resulted in the removal of the many entertained doubts and scruples. It then was conceived that

a course of argument, which thus had satisfied an individual enquirer, might also prove no less useful and satisfactory to that still numerous class, whose hesitating opinions, or unremoved prejudices, yet cloud their perception of those beautiful accordances ever really pervading and evidencing the one August source alike of the Word and Works of God.

That settled opinions should be entertained on this interesting subject, cannot be an unimportant matter, either as it regards our handling the objections of the scoffer, or the serenity of our own minds. These are not times when any one who duly estimates the invaluable interests dependent upon religious influences, can shut his eyes to the novel lights shed from the marvellous discoveries of Modern Science, or be indifferent to the harmony the Written Revelations in the Bible may present to these other advancing revelations the Almighty continually is making to us in Nature's Book.

Many are the theories—for the most part founded upon some compromise either on the side of Scripture or of Science—which have been put forth for the purpose of establishing this desirable accord-

ance: its satisfactory solution, upon a basis preserving *in their entirety* the integrity of both Records—the Operated and the Written alike—would be a result of no mean importance to the sacred cause of Truth.

The present humble endeavour, in furtherance of this consummation, pretends not to any novelty of scientific research, nor to any originality of Biblical criticism. The considerations offered in the following Work for the purpose of manifesting the harmony which may be heard to echo from the Archives of Nature and the Records of Inspiration in their concurrent revelations concerning an Archaic Earth, are chiefly deduced from many elaborate Works dedicated more immediately to other objects. All, therefore, professed now to be accomplished, is to have collected various scattered rays, and brought them to reflect their concentrated light in elucidation of the one subject here under enquiry;—a subject interesting, it is conceived, no less to every reflecting mind than to the professed Theologian: for surely the claimed vast Antiquity of this Globe on which he lives—so far removed, according to its professed

Archaic monuments, beyond the historic period of our own human Annals—can hardly be devoid of soul-stirring considerations, and of deeply instructive matters of research, to any one in the ordinary sphere of intelligent society.

It is for this class of readers, then, and not for the professedly scientific, that the ensuing pages are designed; and ample will be their reward, should they in any degree tend to bring about the publicly-expressed wish of one of our most eminent British Naturalists—*that the day may speedily arrive when the creed of the people and the creed of the philosopher may be one.* It is thus we may hope that the grand end of all true philosophy may be achieved, in the higher exaltation of the Almighty's glory, by a more intelligent and adoring survey of the Wisdom, Immensity, and Benevolence of His Works.

The course of argument pursued in the following investigation has been, in the *first* Chapter, to show, from the necessities of the case, arising from the manifestly gradual unfolding of the phenomena of the Universe,—and no less from the evident structure

and design of the Word of God,—what are the required principles of interpretation which ordinarily should be applied to the Scriptural Record of Natural Facts.

Seeing from these considerations that occasional modifications of our pre-existing opinions may, in the progressive disclosures of Nature, be demanded, there is then, in the *second* Chapter, popularly stated, some of those chief evidences of the Earth's Antiquity which, by their recent development, claim that our currently-entertained interpretations of the Mosaic Record of Creation should be brought more into accordance with the advancing revelations God has thus vouchsafed of His mighty Works.

It is then, in the *third* Chapter, attempted to be shown, by a critical examination of the text of the Mosaic Record, in what manner the fact of an Archaic Earth may thus, in sweet accord, be seen to harmonize with the literalities of the Inspired Revelation of the Creation;—and a train of concurrent testimony to this happy accordance is, in an Appendix to this Chapter, cited from miscellaneous writers both of ancient and modern date.

In the *fourth*, and concluding Chapter, are advanced some of those many Moral uses properly to be educed from the established fact of the Earth's Antiquity, and which impart to this subject not merely the interest of an awakened curiosity, but also the impressment of high practical truths.

THE EARTH'S ANTIQUITY.

CHAPTER I.

PRINCIPLES OF INTERPRETATION APPLICABLE TO THE SCRIPTURAL RECORD OF NATURAL FACTS.

Among these rocks and stones methinks I see
More than the heedless impress that belongs
To lonely Nature's casual work; they bear
A semblance strange to power intelligent,
And of design not wholly worn away.

And I own
Some shadowy intimations haunt me here,
That in these shows a chronicle survives
Of purposes akin to those of man,
Measuring through all degrees, until the scale
Of Time and conscious Nature disappear,
Lost in unsearchable eternity.

WORDSWORTH.

NATURE is not less richly gifted in her more
retired adornments, than in those outward
robes of beauty that meet the casual eye. Copious,
indeed, are the stores treasured up in the apparently
most unpromising portions of her mysterious frame.
What marvels of creative wisdom! what large ma-
terials for elevating thought lie entombed under

every footstep we mark upon the pregnant earth ! We walk over the buried ruins of multitudinous worlds ; the surface that bears us up is formed of the successive convolutions of innumerable creations—in long ancient time teeming with animal life, or glowing with vegetable beauty—while the records of their far-stretching history, shew forth in their deep-laid sepulchres their Maker's praise, for the most part unheeded and unknown. Confining its observation to the present epoch of the world's history, the heedless eye passes over the legible traces in the earth of long receding epochs of ancient worlds. Proud man will hardly believe, indeed, that this earth has had any thing to do with economies and existences with which *he* has not been connected ; his self-consequence would fondly fancy that this globe has been the theatre, merely, of *his* exploits, and all the discovered evolutions of the earth he would date, only, from the period when human annals begin ; hence thousands of objects lying along our path which ought, with awakening voice, to speak to man's intellect, and to his devotional feelings of a wisdom illimitable, and the exercise of a power, in the earth's eternal Architect, stretching far beyond the sphere of human cognizance, have their marvels unnoticed, and their lessons of exalting piety unapplied. Justly we regard with pity the mental feebleness in the untutored Indian, who, looking upon the evening

sky, discerns in its starry expanse only a spangled canopy stretched for a covering over his head; or bending down to the grassy sod sees only a green carpet spread for his feet; and well we wonder that his eye can wander over such speaking oracles of Creation's power, unaroused to some accordant influences. But not less strange is it that civilized men, with intellects trained to a far-piercing mental sight, should, nevertheless, live the inhabitants of a terrestrial sphere so wonderfully framed and endowed, and yet remain insensible, as so many do, to the antique marvels of his own loved dwelling-place. What, in very truth, is this terrestrial abode he now, in his course, inherits? It is the repository of exhaustless mysteries; the chronicled archive of unnumbered epochs; the sepulchre of an infinite series of by-gone beings; the antique storehouse of long-elaborated appliances for human uses—displaying in its vast mysterious whole the noblest sanctuary yet opened to our view of the Almighty's goodness, and of His unsearchable skill. We lose much indeed of benefit and blessing, accessible to all, by this strange oversight of the wonderful matters abounding in this earthy globe we live on—yes, much is lost, that might expand our conceptions, and lead our thoughts heavenward, would we but read the records of former economies of the world on every rock we pass, and trace on every fossil relique our hands may

touch the sculptured memorials of long passed away creations of beings—

The just Creator condescends to write
In beams of unextinguishable light,
His names of Wisdom, Goodness, Power, and Love,
On all that blooms below, or shines above ;
To catch the wondering notice of mankind,
And teach the world, if not perversely blind,
His gracious attributes.

True it is indeed, that this strange, rich page in Nature's chronicles, has only recently been laid open, in any discernible manner, to our observation. It is but in late years that the researches of science have been directed so to penetrate into the buried records of the Earth, as to display the added testimony its monuments of deep antiquity yield to the great Creator's power. At no long distant period those terrestrial phenomena were only very dimly shadowed out, which, it has been reserved for investigators of the present day, to have clearly revealed to their view.

There is something singularly indicative of a peculiarity in the action of Divine Providence, in this *gradual* development only, which seems permitted, of the traces of the Creator's footsteps through His universe. One age has unfolded to it one extraordinary revelation of His creative wisdom, and to another age a farther advancing display of what He has done, is vouchsafed : each progressive manifestation more and more evidencing a unity of design

throughout all, and a simplicity of action in all, which bespeak one grand efficient First Cause as the ever-living, ever-actuating source of the whole stupendous plan. Now it would seem to have been the purpose of Divine Providence, in these His dealings with mankind, that each succeeding period of the world should have the Almightiness of Divine agency in some particular field of Nature specially unveiled to its view—tending thus as generation follows generation to keep the intellectual powers, in adoring amazement always awake by these fresh insights, ever and anon, to each age opened, into the arcana of God's workmanship in the universe. At one time we see the human mind taking a widening sweep over the regions of space, and bringing down the starry worlds, as it were, to the very earth, opening new springs for adoring intelligence in the wonders of Astronomy. At a succeeding time we see the hand of scientific research penetrating into the very minutiae of Nature's mysteries, and by the combinations of elementary things entering through the operations of Chymistry almost into the laboratory itself of the world's primal constituents. At another time we see investigation bringing to light the hidden springs and working of the human frame, and by the revelations of Physiology evidencing the beautiful laws that govern and sustain all animal economies. At a more recent period, that sphere of Nature's ope-

rations more particularly in course of development, may be said to be, the exhumed wonders of an Archaic Earth, with all its long-revolving series of past economies, and its continuous successions of sentient creations, as revealed by the researches of modern Geology. This branch of Natural Science in its very infancy was in aspect, a giant, from the almost supernatural amplitude of its vast pretensions; indeed, it drew forth to light, at once, from the secrecies of nature, more objects of startling novelty, more subjects of mysterious wonder, than had ever before, at one step, been adduced, by any prior investigation of her hidden sanctuaries. For while Astronomy, penetrating into the illimitable regions of *Space*, had brought back to us wondrous intelligence of other worlds upon worlds, revolving there besides our own, Geology, on the other hand, penetrated into the illimitable regions of *Time*, and thence brought back intelligence of multitudinous worlds having evolved through unmeasured epochs on our little globe—the theatre, as she disclosed it to be, of unnumbered distinct races of living beings, during immensely distant periods,—and pointing to the successive revolutions, and the accumulated reliques of these ancient systems, she thence revealed the source of that deep crust of the Earth, thus long, in bygone ages, elaborated for our present human abode. Men had previously, from a long study of the starry heavens, some slight

glimmerings of the newly-revealed celestial economies, and hence the discoveries modern Astronomy unfolded were received with wonderment indeed, but not with a general repugnance.—But it was altogether different with the more recent terrestrial discoveries of modern Geology. No conception of the marvellous facts thereby disclosed had, in aforesaid time, been entertained; an entirely new field of vision burst at once upon the human mind; that which just before had been conceived of only as a confused amorphous mass of rock, unyielding in usefulness, save as materials for our own proud habitations, was, in an instant, found teeming with reliques of living creatures, and possessing a regular organization, and successive periods of evolution, which, by their vastness, reduced to very nothingness in comparison our own tiny existences. Where before, therefore, was chaos, light sprung forth: it was like opening all at once an illumined chamber to a previously darkened eye; the mind was confused; the senses shocked! men stood amazed to be, in an instant, called to admit as indubitable truths certain advanced facts and inferences at variance with their preconceived notions of things. Especially the Christian stood in awe, in doubt, in oppugnance, when such new and astounding demands were made upon his belief, and so many changes required in his interpretations of things, by these new researches of Science. For, necessarily it

must happen that every additional unfolding of Creation's works will call for some modification of many of our previous conceptions. The full truth in things is not ordinarily unfolded at once; there is the twilight, and the dusky dawn, before the full sun shines forth; and objects around will take their form and colouring according to that degree of light which may fall upon them—hence it will be claimed, that both in relation to Science and Theology, many notions entertained under partially informed conceptions of the truth, must, when her fuller revelation takes place, be relinquished for views more in accordance with these clearer manifestations. The dimly-outlined shadows, that were deemed realities during the advancing dawn, must give way to the substantial embodiments the full daylight unfolds to view. This is specially applicable to those records of Scripture which relate to natural objects; those objects have, as a matter of course been viewed, and hence interpreted, by the light of that knowledge of the several matters we *then* had at hand; but it was the dawning, not the full light we *then had*; it could not reveal objects as yet in their full true lineaments;—more advanced manifestations shew that our knowledge of the matter was not fully instructed; our prior conceptions therefore call for modification; there must be a revised interpretation of the scene:—nevertheless, a relinquishment is not readily made of any such

long-cherished interpretations of things, although formed, it may be, in these chambers of ill-illuminated perception. Especially will such unwillingness be manifested, when the interpretation has for its subject any enunciation recorded in God's holy Word. Then a holy jealousy is oftentimes aroused which repels the reception of many well-manifested scientific truths. But without reason is any such jealousy entertained with respect to the claims made upon our convictions by the advanced fact of the Earth's antiquity. The object of these pages is to shew, that, although Geology does indeed in its disclosures relative to an antique World, make large demands upon our belief, and call for a considerable modification of currently entertained Biblical interpretations, yet, that the Scriptures of God remain in the midst of these novel revelations conspicuous still as the grand standard of truth, manifesting more and more, from every scrutiny, their origin from the One Omniscient Mind, whose finger and whose tongue, whatever may be the apparent discrepancy, ever are in unison, speaking one voice, revealing one consentaneous course of action, alike in His *Works* and in His *Word*.

It is quite certain that there never can be in reality any discrepancy, beyond what is merely apparent or accidental, between the Word and Works of God ; no more than two streams issuing from one and the same living fountain, can, intrinsically, differ,

that flowing to the right hand being dark and turbid, that, to the left, clear and pure. Should, indeed, the one stream happen in its course to be viewed through some clouded or false medium, it may then *appear* different from the reality, and hence a semblance of diversity from the other may be presented. Or the other stream, passing over some particular channel, may, thus, take up a peculiar colour or characteristics,—this, also, may lead to a supposition of native difference; but let the former be viewed by a light freed from ambiguities, and the latter be purified of its accidents, and traced to its pristine source, and their coincidence of origin, their oneness of nature, must be at once manifested. In like manner, let the professed phenomena of Geology be admitted only so far as the facts and inferences have had shed on them the light of clear undoubted testimony, and let the Records of Inspiration be likewise freed from the peculiarities of accidental interpretations, and viewed only in their pristine genuine characters; and the harmony between what God has *done*, and what God has *said*, can then never long be doubtful. Well indeed it has been observed, that, “when we become at once better Geologists, and better Biblical critics, we shall wonder how any considerate man found any thing to perplex him in the matter.”

The grand desiderata towards the happy perception of this innate concordance, will be—to obtain

true facts of Nature to build upon, on the one hand, and on the other, to ascertain the legitimate scope of Scriptural interpretation in reference to such subjects of natural science as the Bible may record. It is to the investigation of this latter point that attention will now, in this present chapter, be primarily directed.

What, then, are the right principles that should govern our interpretations of Scripture in its records of natural facts?

Although Nature and Scripture have both issued from the same divine source, they have not issued at the same time, nor flowed in the same channel, nor have they borne along on their currents the same ostensible purposes. These diversities in their circumstances must necessarily, in any endeavour to trace their truthful coincidences, call for the application of certain principles of investigation which may meet the diverse local condition in which we respectively find them. The laws of Nature, which by God's mandate have been from the beginning, affixed upon, and have governed the operations of the material Universe, have flowed from His throne in ages long anterior to the issuing of the streams of His inspired Word. When that Word at successive periods came forth, many of Nature's operations which had all along proceeded on in their ordained course, and some of them even *worked out* their primeval purposes, were, nevertheless, as to their very existence, as yet unre-

vealed to man's knowledge ; some of them indeed would at those periods have been utterly beyond the range of his intelligence, and it was quite out of the ostensible purpose of Holy Writ to convey any such intellectual information. Naturally it would happen therefore that when the sacred Historian would refer to any such facts as Nature in her operations evolved, he would do so only in *the language of appearances*, according as those facts *appeared* to the popular mind. This, therefore, is the nature of the phraseology we oftentimes find in Scripture, and hence the necessity for the adoption of the first principle of Scriptural interpretation now to be enforced—

That the sacred revelation of natural objects should be read according to the language of appearances.

But the records of Scripture in reference to Nature's operations do not always assume this kind of popular phraseology, especially in their relations of long-transpired natural facts ; the language then employed in describing such matters is oftentimes more definite ; terms more in accordance with the accurate reality of things are used, though for ages to come the full amplitude of their copious sense may remain undiscovered, biding the time, till God may vouchsafe a fuller disclosure of one particular after another of His long-ago evolved Works. The character of the language employed in Scripture about any such matter is, nevertheless, always such as at

every period alike may subserve the grand moral purposes of all Scripture, and on the face of the record itself speak to each successive generation of men alike the Almighty's attributes ; but the full nature and exactitude of any particular fact thus predicated, will not have been understood alike by every age ; *that entirety* of comprehension of the natural fact indicated will be the privilege of those to whom the long-evolved, but long-concealed stream of Nature's course may, in relation to that particular operation, be at length unfolded. Then both streams—God's Word and Work—being exhibited and viewed together, under equal lights, their beautiful accordance will come forth to view to the glory of their common Author. This then—the long envelopment, and after disclosure of the full and true operations of Nature—furnishes the necessity for a second principle of Scriptural interpretation to be here enforced.

That the Works of God, in their gradual development, claim from us a modification of our previous interpretations of the records of His Word in reference to natural facts.

The application of these two principles of interpretation which have now been adduced, will, it is conceived, serve to clear away many apparent discrepancies between God's Word and Works.—We proceed now to exemplify the first-mentioned rule viz. That the Divine record of natural facts often-

times claims to be read according to the language of popular appearances.

It should distinctly be remembered, that nowhere in Scripture is it intimated that there was any intention to convey to us therein, any information on subjects of natural science, or afford, as a primary purpose, an insight into the operations of the material world. The evident object of the *written* Revelation of God appears to have been altogether different. It was designed to be a communication from the Almighty concerning man's moral nature, and his spiritual destinies ;—to trace man's history up to its original,—unfold the economies of providence under which he has been governed,—shew how he has been preserved in being, since his race was placed on this earth,—and reveal the dispensations of mercy under which his fallen nature may be graciously saved and trained for glory. It would seem quite foreign, to this evidently spiritual scope and object of the written Revelation, to instruct man respecting physical facts, or expressly to furnish us with any insight into the operations of the material universe. True is the remark “ that to seek for an exposition of the phenomena of the natural world among the records of the moral destinies of mankind, would be as unwise as to look for rules of moral government in a treatise on Chymistry.”

Allusions and facts relating to the material world

are, indeed, incidently introduced into this Spiritual Revelation, both in the way of historical record, and of apt moral illustration; and when so introduced, bearing as they do the direct impress of Divine inspiration, they are religiously to be received as undoubted facts; but as facts, nevertheless, to be read and understood by the light of that other more express and explicit revelation of himself in *the ways of his natural operations*, which God additionally, but equally under the commanding impress of his hand, has opened to us in the unfolded volume of his Works. In that *operated* revelation of himself we should, with no less profound reverence of obligation, receive the traces of his designs in the natural World, than in his *written* Revelation we reverentially trace his designs in the moral and spiritual World. Each expands before us its own ample marvellous field of Divine manifestations, and both must be traversed together, and each be allowed to reflect its light upon the other, if we would ever fully understand either of them aright.

We need not therefore ever to tamper, as has sometimes unhappily been done, with God's Word, reducing its announcements of natural things to traditional fables, or to mere mythic figures for moral teaching; but taking the written Word as being wholly and really *God's true Word*, we are to receive its revelations as *true* according to the *real facts of the case*,

whatever may be the language in which the written record of those facts may be clothed. This language may not always have been such, at the time of the record being written, as may most precisely accord with scientific exactitude,—as discovered at a more advanced stage of physical knowledge; (although even in this respect, as will hereafter be shewn, the Divine Record is a miracle of wonders, in some of its supposed most ambiguous revelations)—but as a general principle, we may expect to find in Holy Writ, that the language ordinarily used in relating any physical fact, will, in order to convey any instruction, or even meaning, to the parties addressed, be adapted, rather, to the notions *entertained by them* of the subject in hand, than to the scientific reality of the actual phenomena. What is the object in view, in the scriptural record of any natural fact? it is to convey some spiritual intelligence or some moral lesson to the mind addressed. Now, in order to this, the fact recorded must be described in language which that mind can intelligently conceive; hence, such terms will necessarily be employed as may accord, only, with the current notions at the time entertained; and the then state of natural knowledge will be the indicator of its descriptive words, rather than the actual scientific nature of the fact be precisely reflected in its own appropriate phraseology.

We have a very well-known example of this

needful adaptation of Scriptural language to the actual intelligence of the times, in the history recorded in the Book of Joshua, of the sun standing still upon Gibeon, and hasting not to go down about a whole day, while the people of Israel avenged themselves upon their enemies. What are the real physical facts in this case, as now universally admitted? They certainly do not accord with the actual wording of the Scriptural Record. The more recent researches of Astronomy have convinced every one, that it is not the sun that moves, but the earth, which, revolving diurnally, causes the duration and succession of day and night. Hence the more precise description of this miracle would evidently have been, that the *Earth* stood still, to produce the described effect. But such language would have been perfectly unintelligible to the people of those days, who, uninstructed in the truths of Astronomy, formed their conceptions of the celestial movements according to the appearance of things, which to them, and no less to us now, would indicate, that it is the sun that rises and sets and moves in its course, rather than the earth. But because this miraculous phenomena is here described according to the then current notions,—and indeed according to the only intelligible notions,—is it less a real fact? certainly not. *The Sun did that is there meant by standing still*; it shone a longer time on the Valley of Ajalon, and thus afforded the Israelites a

lengthened period for their victorious advantages ; hence they were taught that the Almighty interposed in their behalf ; and the grand design of Holy Scripture, in the discovery of God's moral government over mankind, is, by this record, manifested to the world. For as this was the only intelligible way to speak to the people of Israel concerning this miracle *at the time*, so was it the only useful way to record it for *future* benefit.

The learned Shuckford in his commentary on this passage says :—“ God did not direct Joshua to record this event in a manner more agreeable to true Astronomy, because if he had done so, unless he had inspired the world at the same time with a true knowledge of Astronomy, the account would rather have tended to raise amongst those who read it and heard of it afterwards, disputes and cavils ; and it would have appeared a wild fancy, rather than a true account of a real miracle, and so would have received little attention by the persons for whom it was written, and hence have failed to promote the great ends of religion intended by it.”

The following remarks by the illustrious philosopher Kepler, concerning his own favourite study of Astronomy, are equally applicable to Divine revelations in respect to all natural objects, and may serve to illustrate our subject.

“ Astronomy,” he says, “ unfolds the causes of

natural things; it professedly investigates optical illusions. For even we astronomers do not pursue this science with the design of altering common language; but we wish to open the gates of truth, without at all affecting the vulgar modes of speech. We say with the common people, the planets stand still, or go down; the sun rises and sets; it 'comes forth from one end of heaven, like a bridegroom from his chamber, and hides itself at the other end; it mounts into the midst of the heavens.' These forms of speech we use with the common people; meaning only, that so the thing appears to us, although it is not truly so, as all astronomers are agreed. How much less should we require that the Scriptures of Divine inspiration, setting aside the common modes of speech, should shape their words according to the model of the natural sciences, and by employing a dark and inappropriate phraseology about things which surpass the comprehension of those whom it designs to instruct, perplex the simple people of God, and thus obstruct its own way towards the attainment of the far more exalted end at which it aims."

This judicious view of the necessary structure of the Scriptural records, and the ofttimes erroneous conclusions to which a forgetfulness of this right principle of Biblical interpretation in relation to natural objects leads, is further very aptly illustrated in some striking observations of Dr. Whewell, in his

History of the Inductive Sciences; and as the sole object of the present Work is to present this question in those lights which may best elicit the truth—no hesitation is felt in enriching its pages with a lengthened quotation which is no less valuable from the beauty of its conception than from the force of its argument.

“The moral and providential relations of man’s condition are so much more important to him than mere natural relations, that at first we may well suppose he will accept the Sacred Narrative, as not only unquestionable in its true import, but also as a guide in his views even of mere natural relations. He will try to modify the conceptions which he entertains of objects and their properties, so that the Sacred Narrative of the supernatural condition shall retain the first meaning which he had put upon it in virtue of his own habits in the usage of language.

“But man is so constituted that he cannot persist in this procedure. The powers and tendencies of his intellect are such that he cannot help trying to attain true conceptions of objects and their properties by the study of things themselves. For instance, when he first read of a firmament dividing the waters above from the waters below, he perhaps conceived a transparent floor in the skies, on which the superior waters rested which descend in rain; but as his observations and his reasonings satisfied him that such

a floor could not exist, he became willing to allow (as St. Augustine allowed), that the waters above the firmament are in a state of vapour. And in like manner in other subjects, men, as their views of nature become more distinct and precise, modified, so far as it was necessary for consistency's sake, their first rude interpretations of the Sacred Narrative, so that without in any degree losing its import as a view of the providential course of the world, it should be so conceived as not to contradict what they knew of the natural order of things.

“ But this accommodation was not always made without painful struggles and angry controversies. When men had conceived the occurrences of the Sacred Narrative in a particular manner, they could not readily and willingly adopt a new mode of conception ; and they resisted all attempts to recommend it to them, as attacks upon the sacredness of the narrative. They had clothed their belief of the workings of Providence in certain images ; and they clung to those images with the persuasion that without them their belief could not subsist. Thus they imagined to themselves that the earth was a flat floor, solidly and broadly laid for the convenience of man, and they felt as if the kindness of Providence was disparaged, when it was maintained that the Earth was a globe held together only by the mutual attraction of its parts.

“The most memorable instance of a struggle of this kind is to be found in the circumstances which attended the introduction of the Copernican theory of the motion of the Earth, to general acceptance, being opposed to the language of the Sacred Record.—Such modifications of the current interpretation of the words of Scripture, appear to be an inevitable consequence of the progressive character of natural science. Science is constantly teaching us to describe known facts in new language, but the language of Scripture is always the same. And not only so, but the language of Scripture is necessarily adapted to the common state of man’s intellectual development, in which he is supposed not to be possessed of science. Hence the phrases used by Scripture are precisely those which science soon teaches man to consider as inaccurate. Yet they are not on that account the less fitted for their proper purpose : for if any terms had been used, adapted to a more advanced state of knowledge, they must have been unintelligible among those to whom the Scripture was first addressed. If the Jews had been told that water existed in the clouds in small drops, they would have marvelled that it did not constantly descend ; and to have explained the reason of this, would have been to teach *Atmology* in the Sacred Writings. If they had read in their Scripture that the earth was a sphere, when it appeared to be a plain, they would only have been

disturbed in their thoughts, or driven to some wild and baseless imaginations by a declaration to them so strange. If the Divine Speaker, instead of saying that he would set his bow in the clouds, had been made to declare that He would give to water the property of refracting different colours at different angles, how utterly unmeaning to the hearers would the words have been! And in these cases, the expressions, being unintelligible, startling, and bewildering, would have been such as tended to unfit the Sacred Narrative for its place in the providential dispensation of the world."

Had these correct views been always entertained, how much of justly-merited discredit would they have warded off both from Religion as well as from Science! for how often might they, on the one hand, have stayed the uplifted sword of persecution perpetrating its cruelties under the name of pious zeal, and on the other, have checked the timid compromise of truth succumbing to power under the guise of Philosophy. The well-known history of Galileo will stand a lasting monument of the folly of resisting the clear inductions of philosophical facts, under the pretension of their being opposed to current authorized interpretations of Scripture. This renowned Philosopher, possessing the glory of first bringing forward, in a popular light, the true astronomical principle of the Earth as a sphere

revolving round the sun, is seen summoned by the Inquisition before their tribunal at Rome, to answer for the ascribed heresy of thus enunciating a circumstance deemed, then, by the Church, irreconcilable with the revelations of the Sacred Record; and although, to the shame of science, we find him afterwards timorously retracting, in words, his belief in those phenomena, which his senses and his reason alike told him were undoubted truths—yet to the equal shame of religion is he condemned by his blinded judges to the prisons of the Inquisition, for the supposed impious tendency of his philosophic teachings. This undeserved punishment was indeed subsequently somewhat relaxed in consideration of his scientific services, yet was this great and learned man doomed to drag out his future days, to the age of seventy-eight years, under the perpetual surveillance of the *Holy Office*, in the fullest, truest, saddest sense, one of the illustrious *Martyrs of Science*. What a warning lesson does this historic incident read to *us*, who, now, see this same philosophical system for which the illustrious Galileo suffered, admitted at the present day by all men,—the wise and the simple alike,—as the undoubted system of God's universe; a system too which, in the magnificent range of its revelations, and the sublime simplicity of its laws, affords the most irrefragable manifestations of creative wisdom the researches of

astronomy have ever supplied. How impotent is man's resistance when God speaks, whether it be by His Word, or by His Works! and how solicitous should we ever be to seek out, that the Divine voices these two "lively oracles" each alike enunciate, should coincide, rather than oppose, the clear evidences of the operations of God's hand, by our fallible interpretations of the revelations of His lips!

This persecuted Galileo himself has recorded¹ some observations on this subject, which, coming from such a man at such a period of the world, may be no less interesting than appropriate to relate.

"I admit and maintain that the Holy Scripture can never depart from what is true, provided we take it in its true and germane sense; but no one will deny that this often lies deep, and is a good deal removed from the bald signification of the words. If any one think that it is always to be understood according to the letter, he will not only run into error, but he will impute to Holy Scripture numerous contradictions, propositions probably untrue, even heresies and blasphemies. He would be obliged to ascribe to God feet, hands, and eyes; and human properties and accidents both bodily and mental, such as anger, repentance, hatred, forgetfulness of the past, and ignorance of the future. Pro-

¹ *Novantiqua*, published 1636.

positions of this kind have been in this manner expressed by the sacred writers, by the inspiration of the Holy Spirit, in order to accommodate Divine truths to the capacity of the uncultivated and ignorant mass of mankind. It is therefore the duty of competent and diligent expositors to bring forth, in every instance, the true meaning; and to explain the ground and reason of their having been expressed in the words which are presented to us."

Thus wrote Galileo in a comparatively dark age; and when the legitimate scope of Scriptural interpretation was generally unknown.

One more extract on this point from the present Archbishop of Canterbury will shew, that great and good minds, though separated by distance of time, mutually converge to one common centre of truth. Archbishop Bird Sumner, in his *Records of Creation*, says:

"The expressions of Moses are evidently accommodated to the first and familiar notions derived from the visible appearances of the Earth and the Heavens; and the absurdity of supposing that the literal interpretation of terms in Scripture ought to interfere with philosophical enquiry, would have been as generally forgotten, as renounced, if the oppressors of Galileo had not found a place in history."

This may suffice then on this first point,—that the language of Scripture is ordinarily adapted to

the *appearance* rather than to the scientific *reality* of natural objects; and hence in our interpretation of such portions of its record, it will be an important principle to remember, that while the *fact* recorded is infallibly certain, we need not necessarily expect that the *terms* in which that fact is described should be scientifically accurate.

The second important principle of right Biblical interpretation claims equal attention with that already considered, for oftentimes it is required to be brought into exercise, viz.,

That we read the Scriptural Records of natural facts by the light of advancing discoveries in Nature's works.

All Scriptural references to the operations of Nature are not found to be narrated according to popular appearances. Many natural facts are recorded in a more accurate phraseology which really expresses the *actuality* of the physical evolution recorded; but then, that actuality is not, and cannot be, apparent at once, and may be hidden for ages after the written record has been made, because, until the natural fact shall be fully unravelled out of Nature's own acted book, its record cannot be comprehended in all its reality, as inscribed in the inspired written Book. Inscribed in that Revelation it remains, therefore, waiting till the other revelation may be vouchsafed, and then both being read together, the Divine

harmony, inherent between God's concurrent revelations, becomes beautifully displayed. In the mean time, each original record of a physical object serves all along its due office in the moral economy of God; for since the design of His Sacred Word is moral, not scientific instruction, the revelation concerning any operation of Nature does its special work from the first in this respect, even while partially only as a natural fact, displaying the Almighty's power and wisdom, destined however to exercise an accumulated weight of moral influence, when the more entire discovery of the actuality of the natural evolution indicated shall manifest the Divine workmanship in the full majesty of its truthfulness and skill. It is evident that this state of things existing in reference to the Sacred Records, there must be claimed from us the application of this principle of scriptural interpretation,—That we should watch the gradual disclosure of Nature's works, and be ready to harmonize the Written Word therewith, whenever the just requirements of the case may mutually evidence any such necessity.

The chief obstacle to this ready recognition of a coincidence between the archives of Nature and the Records of Inspiration, has already been partially alluded to, as arising from the tenacity with which we are apt to cling to any long-cherished prevalent opinions, regardless that those opinions may have been formed under a state of knowledge upon the

particular subject, necessarily very imperfectly instructed, and hence, on the vouchsafement of additional light, may call for reconsideration, and some probable modification.

Long have the generality of people rested upon some popular interpretation of the Mosaical Record of Creation. And from father to son the traditional opinion has been conveyed down, almost with the sacredness of a household god. It is not to be wondered at if these popular notions of Scripture should be fondly adhered to, as if they were the *very Scripture itself*, whereas it is only a prevailing, or it may be only a *personal interpretation* of that Sacred Oracle, which is thus so pertinaciously cherished; while any fresh rays of intelligence that may be presented, tending to display the incongruity of such notions, and exhibit the revelations of God in a clearer, truer light, are oftentimes repelled.

It is right indeed to be very watchful that the "Oracles of God" be not spoiled "through philosophy or vain deceit," or infringed upon by "the oppositions of science falsely so called;" but we need to be on our guard too, at the same time, lest this very carefulness, though under the guise of right intention, be not exercised rather for the sustentation of our *own views* of Scripture, than for the maintenance, in its integrity, of the Divine Revelation. The suspicion that this may be so, should directly be excited

in our minds, whenever the clearly demonstrated revelations of God's Works may appear to militate against *our* interpretation of His written Word. We are not to suppose that because the general body of good and learned men, at a certain period, interpreted any divinely-recorded facts in a certain way, that therefore, this, necessarily, is the only, or the right interpretation. Those persons, in the age in which they lived, *could only interpret* those facts according to the measure of knowledge they then possessed, which necessarily was limited by the bounds of the revelation God had been pleased, up to that time, to make of his natural operations. It was not possible for *them* to see further, or to explain otherwise; had they possessed other knowledge of the physical matters in hand, their conclusions, we may confidently believe, would have taken a wider range and a truer direction; and the recorded natural facts would have received an interpretation more in accordance with the *whole* revelations of God. But as it was, although they might see some difficulties, and be unable to unravel some anomalies, yet were they chained down by the line of their ascertained experiences, and could not go beyond it.—To gather from difficulties themselves a true conclusion; to educe light from the very darkness, is not the ordinary gift of mortals. We are destined to pursue the beaten path and wait to enjoy the plenitude of

any revelation, till in advancing time, the sun rolling on in his gradual ordained course, may shine upon us in all his fulness.

Minds there are indeed, raised up occasionally, of gigantic powers, which, outstepping this ordinary march of human enlightenment, grasp instinctively at the reality of things, placed beyond the range of personal experiences. Of this lofty stamp is that wide sweep of mental vision which, lately, has so astonished the world, in the philosophic Le Verrier. That illustrious man stands apart as an intellectual phenomenon, from things that appear determining the things that are wanting.—Mathematical calculations indicate to him some anomalies in the motions of the planet Uranus, evidencing, by the extraneous influences exercised, that our knowledge of the surrounding celestial economies must be incomplete; his sentient mind opines at once, from the established laws of Nature, what the yet undeciphered arrangements of the heavenly spheres *must* be; and waiting not till actual observation shall have disclosed to view the unrevealed agent of the planetary disturbance, he points with the finger of scientific faith to the very spot in the heavens where an hitherto unknown planet *must be revolving*—and at this spot a sage-directed Astronomer finds that glittering orb, destined for ever, there, to roll on, an everlasting monument of the beautiful exactitude of its Creator's

pre-ordained laws, and of the lofty intelligence in unravelling their unrevealed exemplification, with which He is pleased to endow some of his feeble creatures.

But to all great or good men it is not thus given to decipher things that are not, from things that are. No! ordinarily we only can form conceptions of recorded natural operations up to the measure of the actual scientific disclosures made respecting them, and hence must wait the gradual course of advancing knowledge, and oftentimes be called to the humbling task of modifying our Scriptural interpretations of facts, as the arcana of nature may be opened more and more to our view.

Our right judgment respecting the legitimate principles of Scriptural interpretation will so greatly depend on correct views in this particular, that it may be useful to bring forward the luminous reasoning of Dr. Whewell on this part of the subject. In his *History of the Inductive Sciences*, he observes:—

“The meaning which any generation puts upon the phrases of Scripture, depends more than is at first sight supposed upon the received philosophy of the time. Hence, while men imagine that they are contending for revelation, they are, in fact, contending for their own interpretation of revelation, unconsciously adapted to what they believe to be rationally probable. And the new interpretation which the new philosophy requires, and which appears to the

older school to be a fatal violence done to the authority of religion, is accepted by their successors without the dangerous results which were apprehended. When the language of Scripture, invested with its new meaning, has become familiar to men, it is found that the ideas which it calls up, are quite as reconcileable as the former ones were, with the soundest religious views. And the world then looks back with surprise at the error of those who thought that the essence of revelation was involved in their own arbitrary version of some collateral circumstances. At the present day we can hardly conceive how reasonable men should have imagined that religious reflections on the stability of the earth, and the beauty and use of the luminaries which revolve round it, would be interfered with by its being acknowledged that this rest and motion are apparent only."

From the very circumstances of the case then, does there not arise a necessity for the frequent application of that principle in the interpretation of the Scriptural Records we are now considering? Surely it would appear but reasonable, and at the same time no less reverentially due to the progressive revelations God is, from time to time, pleased to unfold of his Works, that we his creatures, who know nothing thereof beyond what he may be pleased to disclose, ever should submissively modify our interpretations of his other Written Revelation, so as to

bring the two disclosures of himself to accord. Let us take as a sure axiom this sound observation of Kepler, that "the finger and tongue of God should ever coincide," and then we shall ever strive to trace out harmonies throughout all the Divine manifestations.

As the tide of scientific knowledge advances, discrepancies may be expected to appear between known physical facts and current scriptural interpretations; but when this may occasionally occur, on which side is it most probable that an error in judgment should exist? Is it in that which our eyes see and our hands handle of the works of God? or in that which our sometimes perplexed, or clouded, or ill-informed, or, it may be, prejudiced minds, may conceive to have been related of these natural operations? The prince of English philosophers in his noble Essays, observes—"He laboureth in vain who shall endeavour to draw down heavenly mysteries to human reason; it rather becomes us to bring our reason to the adorable throne of Divine truth."

A proper humility will certainly induce us to feel that our fallible conceptions may wisely submit themselves to the measurement of clearly-revealed facts. The written records of God will never suffer in their integrity, or in their authority, by passing through such an ordeal: far from it; it is only then that the inconceivable excellency and recondite effulgence of the Divine Record will in its full power be

disclosed ; its marvellous perspicuity, its infallibility, the reality of all its revelations, its anticipations of forthcoming developments, the almost miraculous fulness of hidden intelligence and wisdom laid up in its primitive words—all these marks of “the Divinity that speaks within” will come forth only the more gloriously to view by every close collision of God’s Word with nature’s chronicles. It has ever been found indeed, that the more the light of science has been brought to shine upon the Holy Scriptures, the more satisfactorily the analogies of truth have been elicited, and sincere men have been led more and more to adore that living Word as a perennial fountain ever fresh, ever beautiful, and ever true. Dr. Buckland—a name always gratefully to be mentioned in connexion with any geological subject—has a remark which experience fully justifies, that “superficial geological investigations may lead the mind from the Holy Scriptures, but thorough investigations *lead it back*.” On that Sacred Word, indeed, the perplexed or doubting mind may rest, as upon an enduring rock, which no conflicting waves can unsettle, or lapse of time ever waste away ; for this is a marvellous peculiarity, most instructive to mark respecting the Inspired Volume, that throughout the advancing and oftentimes apparently opposing currents of philosophical knowledge which have successively been developed, we find in its pregnant pages,

oftentimes, a concurrent revelation of the exact truth laid up, clothed so aptly in words of power, as to oracle forth, at the given time, the several realities of the newly-developed things, which long before had been enshrined in its language of mystery.

This pregnant adaptation of the anciently-written word to speak harmoniously in these latter times with recently-revealed phenomena, will, as the main point of this investigation, be brought out to view in a future chapter; and powerfully does the fact proclaim the Divine Inspiration of the Mosaic Record. It may indeed be regarded as a thing impossible that any mere human writer could, so reconditely, have recorded the history of the Creation full four thousand years before its long-hidden secrets should, by modern researches, have been brought to light, as to have described the subject *then*, in terms that will admit of a legitimate interpretation *now*, in full accordance with these recent physical revelations. Truly there is an expansive aptitude in the phraseology of the Divine Narrative, a pregnancy of innate meaning in its every word, adapting it so closely, so wisely to the fullest development of Nature's doings, that none but HE who declareth "the end from the beginning, and from ancient times the things that are not yet done," could possibly have indited it; establishing thus an Oracle from whose hoary shrine voices tuned with

ever-freshening ever-convincing notes of inspiration issue.

It is no needless or unimportant purpose to which such harmony between Nature and Scripture may be applied. This fitness and amplitude of Holy Writ is indeed the weapon required to be used to silence the cavils of the sceptic when anticipating between God's Word and Works an irreconcilable discrepancy. How loudly has the unbeliever triumphed at the difficulty, or the supposed impossibility, sometimes expressed, in producing this proper concordance! He points to certain phenomena which the senses cannot fail to admit as facts, and then points with the finger of scorn to the Bible, and asks for an accordant explication; but his triumph will be but short, when the true principles of scriptural interpretation shall manifest the beautiful harmonies ever educible from the several relative revelations of God.

To disarm the unbeliever, then, we must, while scrupulously maintaining the integrity of God's revelations in his *Word*, at the same time, with an instructed wisdom, so interpret its records, that they may flow in unison with God's Revelations in his *Works*. This will not only remove every sneer of the scoffer, but diffuse a satisfaction, a serenity, a sacred influence over our own minds, experienced alone from the harmonies of truth. Hearing the

concordant voices of Inspiration and of Nature raising one united song to the glory of their common Author, the heavenly chord will vibrate within our own hearts, and modulate there a concurrent adoration.

What then are those recently-established facts of Geology, which claim now the application of these principles of Scriptural interpretation here advanced? The next step in our investigation will be the consideration of this point.—It is incumbent to ascertain if the foundations in Nature's newly-claimed domain be sure and solid, before we can expect that long-cherished interpretations will be willing to give way, and build up new conceptions upon the advanced ground offered. It is purposed, however, in this investigation, only to advert to that one class of explored geological phenomena, which may establish the far-stretching Antiquity of the Earth, anterior to the recorded commencement of the human economy. This pre-Adamite condition of our Globe will, however, involve many other matters respecting antique worlds, which, although not here specifically discussed, are constituents in the marvellous circle of Geological Wonders, and alike bespeak the immensity of the Earth's great Architect and the benevolence and skill of His continuous creative work.

CHAPTER II.

EVIDENCES OF THE EARTH'S ANTIQUITY.

Come, frankly read the rocks, and see
 In them the Earth's biography ;
 Let mountain pil'd on mountain tell
 Its antique age, and every shell
 In fossil form, its tale unfold,
 Of life's bright day, through time untold.
 And gathering use from great and small,
 See good in each, and God in all.

WONDERS are the prolific offspring of our circumscribed experiences. When brighter rays of intelligence enter, and dissipate the mists that oftentimes surround objects, or delusively reflect them, then their wonderment ceases, and, like the Spectre of the Brocken, or the beautiful illusion of the Fata Morgiana, the marvellous revelation may raise our astonishment indeed, but not our incredulity. Apparently there are no wonders so extraordinary as Nature's wonders ; no disclosures so marvellous as those which she is constantly unfolding—not as miracles, out of the course of her regular path, but as the result of those grand perpetual laws which her Divine Author has affixed upon her evolutions, for the evolving of His own gracious purposes in the government of the world But in strict pro-

priety of speech, there are, in reality, no wonders in Nature; nothing is in her domain impossible; nothing there, beyond the range of the conceivable and the attainable.

Nature is but the name for an effect
Whose cause is God.

And who can put a limit to Omnipotence! who can set a boundary around the Eternal Mind! or circumscribe how long, how magnificently, or how variously His power may exert itself, either in peopling the immensity of *space* with living worlds; or in occupying the immensity of *time* with continuous revolutions of those worlds; or in re-arranging their primeval elements into new creations; or applying their imposed laws in evolving new combinations and results;—producing, in short, all those astounding operations,—manifesting more and more His Almightyness,—which are continually, by the progressive discoveries of science, being brought to light. For the Supreme, for purposes of wise intent, has not been pleased to disclose to any age, or any race of men, all the wide dominions of His creative energy at once: there is, in His discovery of Himself as the original Architect, and the continuous Artificer of the universe, a gradual unfolding of his magnificence to view. He raises up one powerful mind after another, who shall open, at one time, one portal of his vast Temple, and at a succeeding time, ano-

ther ; and even at some periods, glimpses seem to be permitted into the very penetralia itself of His inmost shrine, and the primeval springs of nature are almost laid bare to the enquiring gaze of man. But while any particular department in nature's domain may remain only partially opened, or any peculiar phenomena are being gradually adumbrated, these fresh or indistinct exhibitions of God's natural operations are apt to assume, in the eyes of the uninitiated, the character of marvellous fables ; and it is long before they can so far be divested of their wonderment, as to be admitted into the creed of the popular mind.

This has been the fate of most of those striking scientific disclosures which have elevated the intelligence, or ministered to the eventual blessing of mankind. And we of the present day are no wiser than our forefathers in this respect. How long was it before the discoveries of Copernicus were regarded but as a fabulous wonder, and the now universally admitted revolutions of the planetary orbs rescued, even by the learned, out of the pages of the marvellous. How slow were men to hear, but as a wonderment of sportive fancy, that the supposed four elements of earth, water, fire, and air, were no elements of nature at all, but mere combinations of various substances, and thus destitute, in themselves, of any elementary character. How late the period when even philosophers regarded, but as a marvel-

lous wonderment, the reported production of *Ærolites*, and how many have smiled, when reading the pages of Livy, at the credulity of the Roman multitude, who believed in the recorded, and now universally-credited, shower of meteoric stones. How within the range of our own experience, has it been received only as a wonder of the day, that the curling steam we may see rising from the bubbling vessel before us, was one of Nature's most potent operators, while now the marvel is on every hand dispelled by the most ponderous masses being moved by its agency, as if by a giant's hand, or ourselves transported from place to place with a rapidity almost rivalling the very wind. And still more the sense of incredulous wonder has hardly yet passed away, that thoughts and words can be conveyed afar, winged with the very lightning's flash, and the electric telegraph, annihilating all space, open a communication between mind and mind, from one end of the Empire to another, in a few moments of time.

These are a few familiar instances where the wonderment has passed away, when the hand of the Almighty Artificer has more clearly revealed itself in the fuller development of his marvellous works. And these disclosures, when they severally occur, are most important to be recognized and adoringly applied. Such expanded manifestations of the Divine skill and goodness are pages of wisdom not guilt-

lessly by any class to be left unstudied. Nature's unfolded volume is not the book of the Philosopher alone, but specially it is the great open readable book of the people: a great mistake it is to be willing to trace God's ways in his written Word, and overlook that palpable revelation of Himself he has so amply laid open to us in the Works of his hands. Religion is everywhere, whether in the caves of antique times, or in the tangible present. Religion is everywhere where God's hand has been, and the trace of his finger is marked; and we should *read* His attributes and His claims on the painted wing of the now fluttering insect, or on the fossil shell we raise from a long-buried generation, as well as *read* them in the revelations of the Prophets, or the Gospels of the Evangelists.

It is with no irreverent hand, or indevout purpose, therefore, that the Geologist ventures to lay open the crust of the solid earth, and display the arcana of Creative Wisdom treasured up therein. He believes that in the phenomena there presented he traces undoubted evidence of a far-stretching Antiquity, and of many successive creations of organized life. He sees long intervening epochs of the world's evolutions, occupying apparent periods of time impossible by any power of reason, or even any sane exercise of imagination, to bring within the comparatively petty space of our own historic records: and

knowing these facts, and drawing from them their legitimate inferences, he enunciates them, with awe, indeed, at their astonishing disclosures, but with unhesitating confidence. And why should he not? These things may have occupied a place only in the category of wonderments, as other of Nature's now-established truths have done before; but the day of their being regarded only as fanciful marvels has now passed away; and why then should they not be fully and unhesitatingly declared? If this material Globe we inhabit is plainly disclosed to have been revolving throughout periods of time long antecedent to that historic era we previously had calculated, what does it but extend our awful conception of that Omnipotent Being, the exercise of whose power on our earth we vainly before had contracted within the brief span only of the human economy? If successive Creations of Living beings are found to have had their dwellingplace and their sepulchres on this Earth, where, before, we had proudly fancied only man, and those animals now tributary to his power had their habitation, what does it but enlarge our admiration of that All-intelligent Energy which filleth every point of space with miracles of His creative Wisdom, to speak His praise?

These are thy glorious works, Parent of Good!
 Almighty! thine this universal frame,
 Thus wondrous fair; Thyself how wondrous then!
 Unspeakable!

It may be said that such a vast extension of Creation's work as these geological discoveries call for, is at variance with the currently-received views of the Scriptural Record ; and that such views ought not, therefore, to be relinquished without a full and unambiguous establishment of the newly-promulgated phenomena ; and that, too, in accordance with a fair interpretation of the Sacred History.

The requirement here advanced is fully admitted. No one can be required to recognize *as facts* any professed discoveries in Nature, which in their inductions bear so intimately upon our previous conceptions of the Divine economy of the world, unless satisfactory evidence of their reality, as well as of the truthfulness of the inferences derived therefrom, shall be adduced. And no one can be expected to relinquish a commonly-entertained interpretation of Scripture, deemed satisfactory under a certain stage of knowledge, unless furnished with another interpretation properly harmonizing with the more advanced progress of natural intelligence. Agreeably to these admissions, then, the point to which enquiry will now more particularly be directed in the present Chapter, will be

The Truthfulness of the Inferences drawn from Geological Phenomena respecting the Earth's Antiquity.

It is the establishment of this Antiquity, be it

kept in mind, to which alone, in the wide range of geological speculations, the pages of this Work profess to be directed.

It is not to be supposed that there will here be rehearsed any extensive series of geological facts, or that any attempt will now be made to enter into an explanation of those terrestrial operations which have produced their occurrence. Such an undertaking would comprise a treatise on Geology filling many volumes; and is, indeed, quite uncalled for, since there are so many valuable works of information on all these points¹. Nor is it considered necessary even to adduce proof for those few geological phenomena requisite here to be mentioned, as the foundations from whence is deduced the palpable inference of the Earth's Antiquity, now proposed to be investigated. The *facts* of Geology stand, at the present day, on a basis quite unsailable; the most laborious men, in different countries, and among different classes of society, after the most searching investigation in their respective and far-separated localities, have come to the unanimous conclusion, that these professed facts are Nature's

¹ Particularly may be mentioned Lyell's *Elements* and *Principles of Geology*, Phillips's *Geology*; and, for a general view of all collateral matters connected with the science, Dr. Pye Smith's *Lectures*.

faithful Record, not open to be gainsaid. This conclusion has been scrutinized by the learned in all walks of science and literature; and the sage and the Christian alike have set their seal upon it as true. It may be allowed, therefore, to suspend consent to the *inferences* proposed to be drawn from these established facts, but to doubt the truthfulness of the facts themselves, after such testimony borne to them by eye-witnesses, would be as unreasonable as to discredit the existence of Constantinople or Peking, because we ourselves may not have visited those cities.

What are, then, those established Geological Phenomena upon which the inference of the Earth's Antiquity is professed to be built? They may first be stated cursorily, in a general view; and then those particular inferences each series of facts may supply, in corroboration of lengthened periods of the earth's duration, will be more specifically indicated.

1. Penetrating the surface-soil we come at once to various groups of rocks, called Formations, of which the earth's crust is composed to the thickness of about ten miles. These several formations do not form one heterogeneous mass, but are distinct from each other in appearance, construction, and mineral character; and as an invariable circumstance, are found the one lying over the other, in a fixed suc-

cessive order of superposition, wherever the same constituent matters are found located.

2. Many of these formations, or groups of rocks, are formed of series of strata, in thin laminæ, or layers, evidently the one deposited after the other, and by the marks they bear, indicating that such deposition must have taken place after long intervening periods.

3. The several Formations are, in the mode of their composition, and in the materials of which they are constituted, altogether different from each other; some shewing evident derivation from older rocks; others, a long elaboration from sources of very slow and gradual progression.

4. The various rocks, although lying in the same fixed order of superposition, are not in the same order of inclination, one being raised up at an angle, or even sometimes being in a vertical position, while the rock resting upon it is horizontal; thus evidencing the existence and upraising of the one, before the other began to be deposited.

5. Some of these rocks are called Conglomerates, from the circumstance of fragments of other rocks forming their constituent mass; these rocky fragments being there found in a rounded state, from long periods of rolling and attrition.

6. The several Formations are not untenanted masses, but the greater part of them by their vast

embedded Fossil Remains manifest the contemporaneous existence of various creations of Animals and Vegetables; each series of strata having had distinct races of Organic Life peculiar to itself, which in succession have become extinct, till our present existing Races have little in common with the reliques of the generations of Beings found in a fossil state.

7. In none of the various and long-evolving strata of Rocks, though so full of animal and vegetable Remains, have there been discovered any remains of the Human Species, or any vestige of man's works; hence disclosing a long continuous state of the World prior to the creation of Mankind.

This is, then, a general statement of a few of the more palpable and more easily understood facts, which the researches of geological science have brought to light respecting the constitution of our Earth. And it is from these facts that the truth of the Earth's vast Antiquity may, it is conceived, be clearly established: the legitimate inferences from their occurrence are believed to shew,—that the frame of this Globe must have existed,—have passed through long series of terrestrial operations,—have undergone many courses of convulsions and revolutions,—have exhibited interminable changes of its surface,—and have been the seat of successive creations of animal and vegetable life, during far-stretching periods of

time, all anterior to the actual mundane dispensation under which we now live:—thus revealing Antique Epochs of the World, utterly beyond all human power to compute their number or their length. There are many other established geological facts tending to the same conclusion of a deep antiquity, which might have been adduced in evidence; but, in a popular view of the subject, those matters already enumerated may be sufficient to establish the above confirmatory points, and testify to the correctness of the following observations of Mr. Babbage, in the *Ninth Bridgewater Treatise*.

“In truth, the mass of evidence which combines to prove the great antiquity of the Earth itself, is so irresistible, and so unshaken by any opposing facts, that none but those who are alike incapable of observing the facts, and appreciating the reasoning, can for a moment conceive the present state of its surface to have been the result of only six thousand years of existence. Those observers and philosophers who have spent their lives in the study of Geology, have arrived at the conclusion that there exists irresistible evidence, that the date of the Earth's first formation is far anterior to the epoch *supposed* to be assigned to it by Moses; and it is now admitted, by all competent persons, that the formation, even of those strata which are *nearest the surface*, must have occupied vast periods, pro-

bably millions of years, in arriving at their present state."

Proceed we now then to trace out respectively, from the several geological facts enumerated, those inferences of a remote antiquity which may establish these confident opinions.

1. *The various classes of Rocks constituting the several so-called Formations which make up the Earth's deep crust, have a regular order of superposition, which evidences long intervening periods to have elapsed between their respective production.*

The Earth, in the concentric strata of Rocks that compose its crust, has been compared to the successive foldings of an onion. This comparison is certainly not strictly relevant, inasmuch as the same Formations are not continuous everywhere over the earth ; but the allusion may serve to indicate the regular lapping of one rock over the other ; for the several Formations are not heterogeneously disposed, but assume, in all parts of the earth's circumference alike, a regular, and the same order of superposition : hence indicating that the *lower* Formation, *invariably*, formed the surface-crust of the earth for the time being, anterior to the existence of the *upper* Formation. We judge, when we see a curiously-formed construction, having another diversely fashioned construction raised upon it, and as it were burying it, and annihilating it, that the two were not formed together, but time had

elapsed for the one to have subsisted before the other had been commenced. There are found, occasionally, the remains of a Roman Villa, with all its characteristics of the olden time, buried under the foundation of houses in a modern city ; the inference is drawn at once, that the discovered ruin, with its unique materials, and its tessellated pavements, and its solid masonry, was the work of an age anterior to the erection of the city now superimposed upon it: our senses cannot deceive us here, that our actual habitations must have a date far advanced in time from the underlying ruined buildings. Nor less correct would be a like inference from the observance of the respective groups of Rocks which, lying the one over the other, compose the successive foldings of the Earth's crust : each separate Formation, by its position, marks distinct epochs of construction, each shews entire changes of condition, each evidences diverse physical actions at work in its production ; collectively, therefore, demanding periods of time of immense vastness for their respective evolution.

What conception, then, shall we form of these accumulative periods, when we look to the number, and the multitudinous diversities, of the various Formations, as they successively in their several eras would appear in their turn to have constituted the Earth's surface. We have the condition of the Earth, first, when the ancient Granite alone formed the upper crust.

Then, when the Gneiss class of rocks overspread that first granitic Formation. Then comes the epoch of what are called the Silurian Beds, which overlies the Gneiss. Then upon these repose the Old Red Sandstone. Then comes the period when that extraordinary formation, the Coal series, prevailed; followed by the New Red Sandstone; and then by the Oolitic groups; and these by the singular epoch of the Chalk Formation: these various series of supervening revolutions being closed by what are called the Tertiary Formations, which constitute the uppermost beds of stone, next to our own alluvial soil; and hence, the most recent of them forming the surface-crust of the Earth, at the period the nearest preceding the actual economy of its present constitution.

This cursory enumeration of these several Formations, which *each* require distant distinct epochs for their subsistence, and *each* demand distinct extended periods for their successive construction, does not, however, (viewing them thus, only in their general groups,) indicate a hundredth part of the different varieties of existing rocks which each equally shew a separate successive formation and distinct economy; and hence that they have occupied their respective lengthened periods in filling up their destined places in the long terrestrial series; but there have only been here noticed the more prominently distinct classes of rocks, in order that the transition from one state of

things to another on the earth's surface, might, by their more remarkable superposition, be more clearly perceptible ; but in truth, such transition is as certainly marked in all the minor rocky divisions as in the larger ones. And the immensity of time necessarily occupied in all these various terrestrial changes, down from the condition of the Granite World, through all the other separate conditions of the Earth which the different classes of Rocks indicate, and the periods they each and collectively must have required to exist their times, effectuate their purposes, and work out their several economies, exceeds all conceptions we can form of computable numeration.

2. *Each separate Formation of Rock, in its distinct series of laminated strata, and other manifestations of gradual deposition, indicates long periods as requisite for the construction of its entire group.*

The whole series of Rocks accessible to investigation, have been arranged into several groups called *Formations* ; as, for instance, the group which comprises the Slate Formation, the Mountain Limestone Formation, the Coal Formation, the Oolite, and the Chalk Formation, and many others : several of these groups of rocks are composed of laminae, or layers, analogous to each other in character, or, at times, alternating with others somewhat different, but forming one homogeneous mass, which constitutes, altogether, the particular Formation or Rock. Now

these several laminae, or layers, have evidently *been formed the one after the other*, being, to all appearance, gradual depositions from water; and it is clear, from various considerations, that the lower one must have become hardened before another was deposited upon it; and thus, a very long period of time must have elapsed for the production of a single one of these layers;—the solidification of an aqueous mass into a rocky substance being a process of no short progression; how vastly extended the period, then, for the whole series of solidification of the numerous laminae in one particular Formation only! Its immensity may be somewhat conceived of by any one who may have noticed one of these laminated rocks as exposed to view in a quarry or a cliff. Here they may see a towering mass extending to one or two hundred feet in thickness, the several laminae, or distinct layers of rock, *separately solidified*, not being oftentimes more than two or three inches in depth. But this exposed fracture of rock which is there seen, can give no adequate conception of its entire mass, extending, as it does frequently, to a depth of a thousand feet below actual observation, with exactly the same laminated characteristics. A common observer, uninformed of its particular construction, would say, upon seeing the rocky group before him, that it was *one mass*, all formed at the same time; but besides other considerations hereafter to be mentioned, its laminated character

altogether opposes this notion. What should we say of the assertion, that a pack of cards, lying upon one another, and painted on their faces, were all constructed together in one mass; or that a book, with the leaves printed on each side, was manufactured as a whole? No less at variance with reason, and with the reality, would be the conjecture, that an entire series of laminated rock could be formed in a mass, all at the same time. The different layers are, in truth, no less distinct and numerous than the several cards of a pack; or even the printed pages of the largest volume; and are as strongly imprinted, too, with marks of individuality of separate formation: indeed, these laminae, are more like the embossed leaves of the ingenious volumes for the Blind, than any other book; for many of their surfaces are indented with the marks of the ripple of the wave that had passed over them in the time of their consolidation, or are impressed with the foot-print of some animal which walked upon them before they became finally hardened; or they are studded with the incrustations of fossil-shells imbedded in them. It is most important to notice also, that all these various marks, seen on the *upper* surface of the layer *below*, are faithfully indented on the *lower* surface of the layer *above*; thus indicating clearly that the one was hardened *before the other was deposited*; and thus each occupied separate periods of time for their formation. But how long were those periods? We can form

only some approximation to a conception of this, by the period of time we see occupied in the forming of any sedimentary deposit in the present day. We know that Deltas are now being formed at the mouth of rivers ; and Estuaries are being filled up ; and Lakes are receiving earthy deposits, which are gradually upraising the bottom of their beds : and by these present processes we gain an insight into the course of those operations of nature, which seem in the formation of layers of rocks to have been in exercise in former ages. Now some laborious and scientific men have been at the pains to calculate the gradual increase of some of these *now proceeding* deposits,—such as the Delta in course of formation at the mouth of the Nile, and that at the gorges of the Ganges ; and they find that the progress of the depth of increase is exceedingly small, probably not more than a foot in many years. Mr. Macculloch,—a name standing so high for accurate investigation,—states from his own observation, that a particular Scottish Lake does not form its deposit at the bottom, and hence raise its level, at the rate of more than half a foot in a century ; and he strikingly observes, that the country surrounding that lake presents a vertical depth of far more than three thousand feet, in the single series of the Old Red Sandstone formation ; and no sound Geologist, he hence concludes, will therefore accuse a computer of exceeding, if, upon the same ratio as

the contiguous lake, he allows six hundred thousand years for the production of *this series of rock alone*. What we have been considering, let it be remembered, is the production of but a single series of homogeneous laminae comprised in one Formation, constituting *one* only of the groups out of the multitude of separate Rocks which compose the Earth's deep crust. What then must be our conception of the extent of time required, when we come to reflect upon the period requisite for the production of the entire series of rocky groups, each so distinct in their qualities and constitution, from the other; and indicating by such difference, an entirely different physical condition of the earth for their subsistence; and hence, not only long periods of *repose* for their formation, but also long periods of *revolution* for the indicated changes? The vastness of the time demanded for these multiplied evolutions swells into an immensity that overpowers thought.

3. We shall arrive at the same result from a further consideration now to be offered,—that *The varied Composition of these several Rocks indicates clearly their separate formation, during lengthened periods, at far distant times from each other.*

These groups of rocks are as various in their individual appearance, their mode of construction, and the composition of their mineral contents, as they are distinct in their order of deposition, and in the

separate periods when they assumed their relative conditions. The general description that may be given of the constitution of the several stratified Rocks is, that, ordinarily, they are earthy matters, composed chiefly of detritus, worn down from older rocks, deposited by water, and subsequently consolidated. But some of these Formations present varieties so striking, and afford marks so distinctly bespeaking their diversified origin, that they claim to be noticed specifically, as adding considerably to the weight of evidence in favour of the Earth's vast antiquity.

If we observed a gathered heap before us, composed of the broken-off pieces, or the rubbish of some adjacent building, we should unhesitatingly conclude that this derived mass was formed *after* that building had long been in existence, and had indeed began to fall to ruin. Look at a heap of broken comminuted flint-stone mingled with pieces of concrete mortar, oftentimes seen near the ruins of a Roman Tower, or resting against its dilapidated walls; you can have no difficulty in determining the origin of these clearly-characterized heaps: the desolated tower standing by, the homogeneous, antique detritus around it, would tell its own tale. Now, a like certainty of origin we can affix to many of the rocky formations of the Earth. Take the Gneiss Formation, the undermost, and hence the oldest stratified rock of the Earth's crust; we find it com-

posed of comminuted particles of felspar, mica, and quartz, apparently having been held in solution, as if worn off and washed off from some larger masses of these mineral substances, and then deposited in layers of strata, where, now consolidated, they constitute this Formation. Now in what position do we see these Gneiss Rocks? They are invariably lying against or over the Granite Formation, whose rocks are entirely composed of crystallized masses of those very mineral matters of which the gneiss, in a comminuted state, is formed. The parent of the Gneiss, then, is here easily traced, but a parent how reluctant to part with any of its substance, all must acknowledge who have observed how long it takes for a block of granite to be worn and carried away, by the action of water, or of heat, or any other of the ordinary agents of Nature's demolition; and yet these gneiss offspring of the granite detritus are not petty deposits—mere insignificant heaps: on the contrary, they form the most stupendous mountains of the world. The astonishing depth of this Formation is said to exceed many thousand feet. Look, then, at the indurate Granite parent, parting with its substance, as if, reluctantly, by single grains. Look at its derived offspring towering now towards heaven, and then say if any conception of computable time can measure the period of its formation.

Take next the Silurian Formation. Careful examination has confirmed, to the satisfaction of the most searching investigators, that the greater portion of this immense series of rocks were ancient coral reefs; and there are other formations also which take specially the name of *Coral Rag*, from the circumstance of being evidently formed of coralline matters;—their origin and construction clearly being the same as the coral reefs, at the present time progressing by the labours of the Polypi in our modern seas. Now we know that these tiny artificers of the deep work with incredible industry, and rear their mimic palaces of multitudinous inhabitants at an astonishing rate of increase; but when we come to measure by what they *now do*, what they *have done* in long antecedent epochs, in rearing the stupendous masses of Coralline Rock now bearing the impress of their ancient labours, and forming the vast sepulchre of their remains, the mind is overwhelmed at the periods of time required for their gigantic construction. Close observers of nature have computed that the ordinary growth of coral-limestone, in the coral-reefs now under the process of formation in the Pacific, and elsewhere, is at the rate of about *six inches* in a century: it will then require three thousand years to produce a reef fifteen feet thick. But what is that to the thousands of feet in depth to which we find the coralline Formation of rock extend!

Can numbers compute, then, the successive generations of Polypi, labouring through untold time, to accomplish this stupendous work ?

Take, again, the construction of the Coal Formation. Here an entirely new agency, and an entirely new physical condition of the Earth, has produced a class of rocks of a peculiarly interesting character. We find in them undoubted evidences of a decidedly vegetable origin ; and the enormous masses of vegetable remains—in the required periods for their growth—their maturity—their decay—their collection—and their solidification,—all matters needful in the production of this Formation,—must, under the most favourable conceptions we can entertain of vigorous growth, or of any other extraneous assisting influences, have required periods of time for their evolution of incalculable magnitude. The rocky beds, both below and above the actual strata of coal, are, chiefly, composed of vegetable masses, only partially consolidated,—having the foliation of its antique plants still beautifully distinct,—till they gradually pass into perfectly solidified masses of coal ; whose origin is thus evidenced at once as being undoubtedly compressed vegetable matter—the gigantic reliques of the ancient forests of an Antique World. Moreover, these vast vegetable strata alternate, in considerable numbers, with beds of earthy deposit, as shale, sand, and limestone,

which altogether in the entire group constitute a Formation of more than three thousand feet in thickness. Is there then nothing analogous to the process, which we must believe was at work in forming these vast Coal-fields, *now* going on in our own day, forming, as it were, *incipient* coal-beds before our eyes? We have, indeed, in this particular, as in all other discoveries of Nature's operations in the ancient world, an epitome, in the midst of us, of the selfsame work. This is exhibited in relation to the present case, in the Peat-mosses, and in the submerged Forests, known to exist in many parts of the country. Mr. Macculloch states, that the great Peat-moss, near Stirling, has demanded nearly two thousand years for its formation; and this calculation rests not on mere conjecture, for its register is preserved, as he observes, by the circumstance of some Roman works being found below it. Now this tract of modern peat forms but one single bed of coal; while the ancient beds of the Newcastle Coal-series are a hundred-fold. He asks, therefore, "if at the same ratio as the Modern formation, we allow two hundred thousand years for the production of the Ancient one, shall we exceed in our calculation?"

A last instance which may here be adduced, of the apparent length of time required, on a view of its composition, for the construction of a particular Rock, offers itself in the Chalk Formation. The

enormous masses of this rock, presenting their tall white precipices in such simple grandeur to our view, might well excite our astonishment at the periods that would seem needful for their collection and deposition, even if they were mere *inorganic* concretions of calcareous matter. But what shall we say, when the investigations of the microscope have lately revealed to us, that these Mountains of Chalk, instead of being formed of mere inert matter, are, on the contrary, mighty congeries of *decayed animal life*, the white apparent particles of which the chalk masses are composed, being, *each grain*, a well-defined, organized being, in form still so perfect, their shells so entire, and all their characteristics so discoverable, as to cause no doubt to naturalists as to the species in the animal economy to which they belong. How justly does Mr. Lyell, who in his *Elements* records at length this surprising discovery, exclaim with Byron,

The dust we tread upon was once alive !

And further remark, “how faint an idea does this exclamation of the poet convey of the real wonders of Nature ! for here we discover proofs that the calcareous and siliceous dust of which hills are composed, has not only been once alive, but almost every particle, albeit invisible to the naked eye, still retains the organic structure which, at periods of time incalculably remote, was impressed upon it

by the powers of life." If this be so then, that each grain in a mass of chalk presents us with a Relique of an organic creature, what periods shall we venture thence to assume for the lengthened production of those stupendous congeries of these Beings which compose the entirety of this immense Formation? Look at the lofty precipices which lay naked a slight section of the Chalk at the Culver, or the Needles' Cliffs in the Isle of Wight, or the still loftier Shakespear-Cliff at Dover, and let the mind form a conception, if it can, of the countless generations of these minutest of living creatures it must have required to build up, with their decayed bodies, and their shelly exuviae, layer upon layer, those towering masses there brought to our view. And when he may have done this with respect to all that meets the eye, he has accomplished comparatively nothing towards forming a full conception of the mighty reality; for the thickness of the Chalk Formation displayed in the height of our loftiest cliff bears but a slight proportion to the depth it descends beneath. Who then shall dare to compute the time required for its entire elaboration? the contemplation almost advances us a step towards forming a conception of infinitude!

Let it be remembered now, that these several instances here, under this division of the subject, aduced of different and long-elaborated construction

of Rocks, did not occupy synchronical periods, but consumed successive durations, each adding its accumulation of time to the other; and the inference then of an inconceivable Antiquity to the Earth becomes clearly demonstrable.

4. Another branch of evidence conducing to the same purpose of establishing the Earth's vast antiquity, by manifesting the length of time requisite for the formation of the respective Rocks, may be found in the fact of *the different angles of inclination in which the several Formations and strata lie in respect to one another.*

This geological phenomenon opens a wide field for many interesting speculations, all bearing upon the present subject; but the considerations connected with the slow and gradual upheaving of the strata; and the singular action of cleavages and faults; and all those other collateral matters in this department of geology,—each indicating lengthened periods for their evolution,—must be left to more extended treatises, and the single fact, readily recognizable by all who have seen two different rocks in juxtaposition, must suffice here to be mentioned, viz. that the underlying rock has a dip or inclination different from the overlying one, the former being raised up at an angle, or even sometimes upheaved into an absolutely vertical position, while the latter remains in its original horizontal state. Now this is no un-

instructive page in Nature's book which is thus opened to us ; it reads us a tale of long periods of time intervening between the formations of these two contiguous rocks ; for it is evident that all sedimentary formations must originally have been deposited in a horizontal position, being deposits from water finding always its own level—the *lower* rock of these two being now inclined must therefore, by some internal force, have been upheaved *posterior* to its own formation and consolidation ; but *anterior* to the *upper* rock now still remaining in its flat position having been began to be formed and deposited upon it. Could such circumstances have been effected without the recognition of two epochs of time of long duration intervening ? Let the Pyramids of Egypt, with the accumulated masses of Sand now covering their base, and resting on their inclined sides, tell. All who have visited these huge pyramidal structures, will readily have perceived that their solid upraised masonry must have been elaborated, and long periods have elapsed for their subsistence, and practical use, before those slowly-growing mimic strata of flatly spread-out sand could have gathered themselves and settled down upon their slanting flanks. But let the mind, from this scene of modern days, extend its conceptions back to times and scenes when the “ mountains were brought forth, and the high hills were made,” and then reflect that if these mighty Pyramids

—mighty in comparison with other human works,—took so many years, with all the appliances of despotic power, to rear their massive piles, over an area only the largest of them occupying about eleven acres, and these sandy layers but partially burying their inclined sides, have, nevertheless, been the accumulation of many many ages ; then what must be the time required for the forming, and after uprearing into their inclined position, of those lofty mountain-ranges, and for the depositing afterwards of those extended horizontal strata, that rest upon their sides—occupying areas each of them millions of times more extensive than those modern Egyptian wonders ? Truly the Pyramids, and their wide-covering Seas of Sand, sink into mere Liliputian works ; and all the long course of years history carries us back for their eventful evolutions, seem compressed into the mere representation of a dramatic scene on the fleeting stage of a theatre, in the overwhelming comparison.

5. Another fact evidencing the Earth's Antiquity is supplied by those *rocks described as Conglomerates*.

The circumstance corroborative of our present purpose observable in this Formation is, that its rocks are, for the most part, composed of rolled masses of stone, or pebbles, evidently from their character derived from the older rocks upon which the conglomerate rocks rest ; for in no case are pebbles found,

in any Conglomerate, which are derived from a rock lying above it. These pebbles are, then, evidently, pieces broken off by some violent action, from time to time, from the more ancient rocks, and being rolled along in currents for a considerable period, have had their angles and rough edges rubbed away, and at length, in a rounded state, have settled into some earthy deposit, which consolidating, has formed the thus named Conglomerate Formation here under review. Now such a complicated process not only shews that the upper lying rock, thus peculiarly constituted, is more *recent* than that rock from whence its conglomerate masses, or pebbles, were derived ; but also, that an *immensity of time* must have elapsed in elaborating this derivative Formation. Let any one consider the structure of the Old Red Sandstone, chiefly composed of conglomerates, and estimated to be between two and three thousand feet in thickness ; and then, taking up a pebble from the sea-beach, reflect how many years that one little hard stone, he can hold in the hollow of his hand, must, nevertheless, have rolled on some shelving shore, to effectuate its present roundness ; and he thus may gain some slight conception, how many ages upon ages may have passed in the preparation and deposition of those innumerable massive piles of rolled stones, necessary for the construction of these Red Sandstone mountains alone, out of the many vast Conglomerate

Formations that occupy their series in the Earth's solid crust.

6. We come now to another no less striking, than interesting evidence of the Earth's vast Antiquity, afforded *in the various successive Creations of Animal and Vegetable Life, whose remains are found imbedded in the respective strata.*

These beautiful Fossils, "Medals of Creation," as they are aptly called, speak the Almighty's benignant power, and give proof of the lengthened period He has been pleased to exercise His life-giving energy on our Globe, with a voice irresistible and full of delightful contemplations.

It would be out of place here, however, to enter, with any detail, into this rich and satisfactory field of geological evidence; nor will it be possible, in the present brief summary, even to allude to many of those glowing facts connected with these numerous Fossil Remains, which might seem to give to the archives of the Antique Earth the character of an historic romance, rather than a sober relation of natural science. "Our own country alone is a voluminous series of such deposits, containing between its innumerable leaves the embalmed remains of ancient tribes, which for fulness of species and variety of form are to the present extant species, what the whole volumes of an Encyclopædia are to its last issued *part.*" All that can here be attempted, therefore,

will be to select a few of the more prominent inferences, indicated by a general view of the Fossil phenomena. This may be sufficient to set in a satisfactory light the fact, so pregnant in high and interesting consequences, that the Almighty has not confined the exercise of His Creative Wisdom to the living beings and vegetable wonders that now evidence "His handywork" on the existing surface of the Earth ; but that for ages untold, and through epochs unsearchable, this Earth has *teemed* with Living Organized Creations, which have left their Reliques in their rocky sepulchres, that we, too, may now hold converse with existences long gone by, and see our Maker's bountifulness, throughout eras far beyond the range of any human records.

The leading facts, then, in connexion with this particular, which geological research has established, are the following—That the various distinct kinds of Rocks, formed in successive epochs, have each had their peculiar distinct Creations of organized life ;—that these different species of animals and vegetables have successively died out and become extinct, most of them before the next stratum of Rock was formed, which, in its turn, had a Creation peculiar to itself ;—that notwithstanding this general particularity of Creations to Formations, evidenced in the disposition of Fossil Remains now observable in the respective strata, there are found a few fossils that are common

from one contiguous species of Rock to another, but in the lapse of a few progressive Formations these earlier existing genera become altogether extinct, no trace of their Remains, in more recent Formations, being discovered ; and this series of individuality of creations to formations, and yet of slight connecting links between them, has gone on through all the Earth's many and successive evolutions, even to that stratum of Rock lying immediately under our present actual surface-soil ; our now-existing system of Animals and Vegetables being found different in genera from the greater number of the Fossil Remains of the Ancient Earth, and in species also very different, except in a comparatively small number of instances, in which some Fossils are found in the more recent Tertiary Formation, corresponding with the Fauna and the Flora of our present economy.

Now upon these facts, established by the most searching investigations of the greatest comparative anatomists the world has known—having employed the sagacity of a Cuvier, a Buckland, an Agassiz, and an Owen—deductions have been drawn which indubitably confirm the certainty of the Earth's long-receding Antiquity.

Clearly it would appear that these many differing Creations of organic life, not mingling promiscuously, but peculiar each to a distinct epoch, shew at once that those Rocks in which their Reliques

are now severally embedded, were distinct in their formation, one after the other, in long intervening periods ; and it is evident, moreover, that each Formation, before its solidification, must have existed a vast length of time, in its own idiosyncrasy of condition, for the evolution of the phenomena their respective Fossil Remains present ; for these monuments of their living organism are found deposited in every different stage of age and condition, shewing that they lived and died on the very spots where they are now found ; and multiplied their kind, one generation after another, in an indefinite continuity, till the species became altogether extinct. In many cases all this has evidently been done under the most perfect state of repose of the earthy element or matrix in which masses of them have been imbedded ; their spiculæ, and the very spines of their shells, being found now quite sharp and perfect ; while some of the Coralines and the Crynoideæ are still as beautiful in all their ramifications as when they spread their fantastic brachia out in the ancient oceans ; many of them being affixed still to the very mass of limestone on which they had subsisted and died. And still further manifesting the long continuity and regularity of physical evolutions, in the economies under which the Fauna and Flora of the ancient earth lived, there are found in some of the strata the very leaf-sheddings, and the insects of successive seasons distinctively arranged ;

and almost mountain masses of insect-shells, and other sheddings of insects year after year thrown off, are discernible; and in other strata we have traces of ancient forests, and enormous fossil trees, with their concentric rings of structure, marking the successive growth of many many years. Especially in the vast Coal Formations are found beds of vegetables of gigantic size, deposited period after period, as they have grown their astonishing height, and have decayed, layer upon layer, in numbers that defy calculation, compressed as they now are into compact masses of such enormous thickness. Now all these circumstances of the fossil economy indicate the occupation of immeasurable periods of time, even if we limit our observation merely to the operations of organic life which exhibit themselves within the range of *one* only of the many series of Rocks. What must we say, then, when we come to calculate the *aggregate* of the whole operations of animal and vegetable life, carried on throughout the *entire series* of the Earth's numerous Formations, with all their distinct generations of living beings, and all the vicissitudes they have undergone, and the work they have elaborated, and the wearing out too of so many successive Creations?—for this it is which adds so inconceivably to the periods required for all the discovered existences of fossil organic life,—that they have, as ages have apparently rolled on, *died out*, the particular tribes

becoming *extinct*; their sepulchres only remaining, to stand, as it were, before us like divisional columns set up on the great causeway of Time, to mark off how era after era *has been*, and has *passed away* in its long, but ever-changing course.

The eternal surge
Of time and tide rolls on, and bears afar
Our bubbles: as the old burst new emerge,
Lashed with the foam of ages, while the graves
Of empires heave but like some passing wave.

Certainly this remarkable extinction of races of organic beings, so discoverable in fossil history, is something altogether now beyond the range of our present experiences; we can apply no measure to compute its probable exigencies; for although we know that the *individuals* of a species have ordinary fixed durations of life, yet what may be the assigned period of existence allotted to any one *entire race*, either of animals or plants, we have no means of ascertaining, since no instance has occurred, as far as is certainly known, since the time of the Adamic Creation, of any one tribe of organic life, then introduced, having died out and become extinct¹. Yet what do we find revealed in Ancient Epochs? Some Rocks, in the successive layers constituting their

¹ The Dodo is supposed by some naturalists to offer an exception,—but may it not be probable that this bird will be discovered again in some regions yet unexplored?

particular Formation, exhibit evidence that *entire changes of the whole species* of organic life have many times taken place within the thickness of a few hundred feet. What shall we say then of the accumulated changes in the creations of animal and vegetable life occurring throughout the various series of strata composing the whole ten miles crust of the Earth? or what of the periods of time during which each successive creation has lived its day on the Earth's theatre, and worked out the end its Maker ordained it, and then laid up with its own reliques its record in the bosom of the particular stratum which had been its dwelling-place, a remembrancer to us, that Beings once lived, now to us unknown, and that Epochs for their subsistence have, in the immensity of God's operations, now passed away, far removed and far different from our own.

This particular of the evidence for the Earth's Antiquity may fitly be concluded in the words of Professor Sedgwick, who no less truly than beautifully remarks:—

“Every thing indicates a very long and very slow progression, one creation flourishing and performing its part, and gradually dying off as it has so performed it; and another actual creation of *new* beings, *not derived as progeny* from the former, gradually taking its place. And again, this new creation succeeded by *a third*, nothing *per saltum*;

all according to law and order, all bearing the impress of *Mind*, a great dominant *Will*, at the bidding of which all parts of nature have their peculiar movements, their periods of revolution, their rise and fall."

7. A last evidence briefly to be adduced of the Earth's Antiquity is the fact, that *no Human fossil, nor vestige of any relique of human art, which might mark the existence of Man, has been discovered in any of the Earth's Formations below that present surface-crust, known as existing since the era of historic record.*

This fact is utterly unaccountable, except on the hypothesis, that all the preceding Formations in the Earth's crust performed their evolutions, and had shut up the reliques of their respective creations, in their solidified bosoms, anterior to the period of Man's creation. If we dig into the present surface-soil, or dredge at the mouth of our existing rivers, or in any of their courses running contiguous to inhabited districts, very numerous are the bones of our present species of animals, and numerous the vestiges of a human artificer, that will be found there imbedded. We know that distinct classes of people subsist wholly in Paris, and many in the same way in London, by collecting from the channel of the Seine and of the Thames, animal bones, and the washed-away fragments of works of men's de-

vising ; and it is almost incredible the quantity of such modern "*remains*" they collect. But let any one dig into the vast deposits of the strata, *even immediately* below the present surface-soil, or into any of the continuous chain of deposits forming the multitude of strata down to the indurate granite, and he will not discover *one* such vestige of the present economy ;—one single relique of any of man's works. Their stony sepulchres are indeed full, almost to overflowing, with vast remains of animal and vegetable life, but the present races of beings, and the present works of the world, have no record *there*. It is not so with respect to the contents of those recent deposits evidently contemporaneous with human history. We know, for instance, that the Peat is a Formation of the present economy. Now when we lay open the most superficial covering of a peat-moss, we sometimes find therein the canoes of the savage, together with huge antlers of the wild stag, or the horns of the wild bull of our recent species. We find these things *there*, because this Peat Formation was deposited, as we know, within the period of man's brief history. We find them not *one foot* below that peat-bog, because *there* is a now-covered surface on which man's footstep never trod.

When in the year 1713, some artificers, sinking a deep well in the Campania, came unexpectedly upon the buried ruins of Herculaneum, and subse-

quently discovered the magnificent site of ruined Pompeii, there could exist no doubt in fixing the era of the world when the streams of volcanic ashes and lava submerged those flourishing cities. The human skeletons,—the suddenly impeded operations of human business,—the still bright colourings of human art,—the inscriptions to human glory,—and the treasured inditings of the human mind,—all spoke with undoubting voice that *man* had been *there*,—and historic traditions, no less plainly, afterwards told, when it was that on the surface prepared for the human economy these cities had been reared, and had subsequently been overwhelmed. But amidst all the clear evidences of the volcano's power, and the igneous disruptions and devastations marked in every district throughout the earth's *interior* surfaces, where do we find any traces of an overthrown dwelling where *man* has been? where a vestige of *man's mind* inscribed on the many monuments of life and labour with which the deep crust of the earth is filled? No! man walked not there! with the teeming living beings of those untold epochs he held no communion.—Man has his own historic era, and his own glorious destiny; but the deep expanse of the antiquity which preceded his creation was but preparing a choice abode for the Being whom God was pleased to form the noblest of His works,—privileged, as bearing God's own image,

to inhabit a world so long elaborating for his use—so curiously during such countless ages evolving, to become for *Him*, thus skilfully contrived, thus wondrous fair!

Reviewing, then, these concurrent conclusions, clearly derivable under those several divisions of geological phenomena, which here have been advanced, can a reasonable doubt be entertained of the Earth's vast Antiquity? Compute the several untold periods intervening between the superposition of each massive Mountain Formation. Reckon up the ages consumed in the deposition, one after the other, of their respective laminated strata. Gather into one vast view the time necessary for the elaboration of the slowly-accumulating materials distinctively constituting each diverse group. Measure Nature's laborious progress in the upheaving of the inclined strata, and the deposition on their solid sides of a supervening flat Formation. Count the convolutions and the mighty rollings of the perpetual waves to fashion the huge masses of rounded pebbles forming the Conglomerate rocks. Chronicle, not the individuals, but the epochs of races, of successive Creations of organic life, which have tenanted, each in their allotted day, as their own destined inherited world, the changeful surfaces of the successive strata. Number from one to the other throughout this mar-

vellous series, and examine if a single trace of man's footstep can be seen during the whole course of these august revolutions and existences. View altogether the accumulative mass of these unfathomable durations, and then say if the petty space of the six thousand years comprising man's annals of this revolving Earth shall be deemed sufficient for the evolution of all these its magnificent periods, its interminable transitions, its successive and varied creations, its inconceivably diversified and lengthened exercises of Omnipotent power and skill. Truly, in glancing over the sublime revelations of an Antique Earth, the researches of Modern Geology have thus unfolded, we may well concur in the following burst of feeling which escapes the ordinary calm mind of Professor Phillips, who, after enunciating in his lucid manner some phenomena of the Earth's long-elaborated changes, exclaims—"How can they, before whom the magnificent truths of elapsed time and successive creations have been put in clear and strong evidence, how can they be expected to yield, to false notions of philosophy and narrow views of religion, the secure conviction that in the formation of the crust of the Earth Almighty Wisdom was glorified, the permitted laws of Nature were in beneficial operation, and thousands of beautiful and active things enjoyed their appointed life, long before man was formed of the dust of the

ancient earth, and endowed with a Divine power of comprehending the wonders of its construction! It is something worse than philosophical prejudice to close the eyes of reason on the evidence which the Earth offers to the eye of science; it is a dangerous theological error, to put in unequal conflict a few ill-understood words of the Pentateuch, and the thousands of facts which the finger of God has plainly written in the book of Nature; folly past all excuse to suppose that the moral evidence of the eternity of the future shall be weakened by admitting the physical evidence for the immensity of the past."

With this extract so full of truth, so spiritedly expressed, this part of the present investigation may well be closed. It will be for the succeeding Chapter to shew, that, as the Archives of Nature proclaim thus decidedly the Earth's Antiquity, so the Records of Inspiration utter no adverse testimony, no discordant voice.

CHAPTER III.

THE HARMONY BETWEEN THE WORD AND
WORKS OF GOD IN RELATION TO
THE EARTH'S ANTIQUITY.

“Lo, in unfathomable mines,
Which long His skill conceal,
He treasures up the high designs
His Word and Works reveal.

Blind human sense is prone to err,
And scan His works in vain;
God is *His own* Interpreter,
And He will make them plain.”

THERE are noble harmonies to be heard in the concord of converging truths, which are as the symphonies of sweet music to the soul. To the rightly-attuned mind, no enjoyment can be more grateful than those unisons, flowing from different voices, which, swelling into one harmonious note of truthfulness, resound to the Almighty's praise and power. We may believe that one chief charm, destined hereafter to impart to the glorified celestial Choir its highest tones of delight, will be the faultless unison of their voices; the utter absence of every dissonance from their song; its entire all-pervading truthfulness. Sweet indeed must be the melodious flow, when every jarring sound, now, at times,

arising and marring the sense of harmony between God's doings in nature, providence, revelation, or grace, will be utterly overborne by the fully-perceived concord of concurrent truth, and all the various parts of the Divine measure will echo one full chord of deep converging skilfulness, blending into one melody the grand harmonious whole.

And is there no perception of this delightful Harmony, arising from the concurrent voices of God's various revelations of Himself, vouchsafed to be enjoyed by us on this World now? Truly we may believe there are some echoes of this full melody of heaven to be heard as we toil along our earthly path, dispelling at times, with its sweet concords, the conflicting sounds too frequently meeting us on our way: and the more we may advance in the perception of those natural accordances, which ever must subsist between *all* that is recognizable as coming from God, the nearer we shall approach to that serene sense of truthfulness in things, whose perception, in all its plenitude, will form so large a portion of heaven's delight. To discover and establish, then, this concordance of truth, is the proper province of all true philosophy, and of all sound theology too. *Truth is one*, and to trace out this oneness in any of its obscured phases and different revelations, is no less a labour of wisdom and delight, than it is reverent dutifulness.

Is it in consistency, then, with this love and search for truth, that we should cherish apparent discrepancies, rather than seek for accordances in relation to any of the relative disclosures made by the Deity to man? Should we, when God may be pleased to open a new page of his wonderful works to our view, cling pertinaciously to some prior interpretation we had assigned to another living page he had anteriorly revealed, although such interpretation—formed, necessarily, under intelligence then imperfect,—be found irreconcilable with God's now more recent and fuller revelation of Himself? the two *must* have an inherent bond of accordance. If we listen rightly, we shall ever hear unisons from all the concurrent voices issuing from God's throne.

It is true indeed there is a jealous tenacity, which fondly clings to currently-established notions, as being the accredited results of previously-conceived truths. Such jealousy is by no means reprobable. In this stirring age, the parent of so many novel and untested speculations, it is no mark of wisdom to surrender time-honoured opinions to every opposing proposition; but this same proper conservative feeling—thus indicative of a love of truth—is, nevertheless, consistently carried out, when it may yield up its formerly-entertained convictions, to the needful harmony required to be established with some other clearly, though recently, demonstrated truths. These

latter advanced truths may, indeed, be new and startling, but if undoubtingly authenticated, they claim, equally with older authorities, our ready acceptance, and our faithful application too. They should be hailed, indeed, as sun-rays gleaming forth from heaven to aid us in adjusting more correctly our prior conceptions ; just as a long excluded brighter beam, newly intruding its light into some antique shadowed chamber, shews the objects contained therein,—not indeed different from what in reality they were before,—but more truly discernible in all their parts, and thus enabling us to conceive of each more in accordance with its true nature and its just proportions. “ Prove *all* things, hold fast that which is good ”—is a maxim standing upon an authority the highest and the surest ; and in that gradual unfolding of Nature’s secrets which is continually now progressing, it is a maxim calling for constant and faithful application. We find new disclosures concerning the works and ways of God every day promulgated, which seem to shake the very foundations of old-established convictions, and yet professing to be demonstrable truths ; the master-spirits of the age investigate, and are compelled to admit their truth ;—the circumstance necessarily produces an intellectual agitation ;—many sincere minds,—unable to repudiate the accuracy of the facts promulged, and yet unwilling absolutely to admit their plain legitimate inferences,—strive, by a multi-

tude of hypotheses, to reconcile the advanced phenomena with their preconceived convictions; and, by the abortiveness of the attempt, unconsciously own the reality of the revelations they would impugn,—the impotency, in fact, of every effort for a forced compromise with Truth.

This process has been particularly discernible in respect to the promulgation of the many novel facts in Geology, and especially as it relates to the palpable inferences deduced therefrom of the Earth's immeasurable Antiquity. This Antiquity claimed for the Globe on which we live may be said to be the grand basis of geological science; and being once firmly established, other extraordinary phenomena of an antique world would henceforth be removed from the region of mere hypothesis; and, in the long-evolving days of an *ancient* Earth, have space to rest their foot upon, and during its many mighty evolutions to play their wondrous parts.

But the admission of this far-stretching pre-Adamite condition of our Globe, is found to clash with some currently-entertained interpretations of God's holy Word; and the tendency of our minds in such cases has already been dwelt upon, pertinaciously to adhere to our pre-established conceptions. Yes, frequently is found, indeed, a determination which exalts our *own mere interpretation* of Scripture into an oracle of infallibility, unwilling to yield its dictum

even to any posterior revelation God Himself may vouchsafe; although this added intelligence, to all appearance, is bestowed expressly that we may read the prior revelation by its light. Would it not be truer humility and a better wisdom to see if the two lines of truth may not run parallel to each other; if the double revelation may not accord, rather than interpose our own conflicting interpretation between them, and thus put asunder what we may be quite sure God has joined together? How truly by such unseemly pertinacity the complaint of the Christian poet is verified—

Man only mars the sweet accord,
O'erpowering with harsh din
The music of God's Works and Word,
Ill matched with grief and sin.

A difficulty, doubtless, there will oftentimes be, from the imperfection of our knowledge and powers, in tracing this accordance between God's *written* and God's *operated* revelation; but, assured that such accordance is there, let the mind engage in its search with a disposition to yield up its own imaginings to the leading of God's truth, and then through some obscurities it may hope at length to emerge, and joyfully trace that golden chain, which, linking together the Archives of Nature and the Inspired Word, will manifest the glorious Deity alike present and wonderful in each. Not, indeed, that when finding this reasonably to be anticipated accordance we are to expect to

hear the Record of Inspiration explicitly enunciating Natural phenomena ; much less may we look for any distinct declaration of the Earth's Antiquity. Such scientific disclosures would seem, as in a former Chapter has been observed, altogether foreign to the ostensible object of the Divine Record, which appears to have only so far designed to allude to Natural objects, as might subserve Moral purposes and manifest the agency of God's Providence in the World's eventful history. All we may reasonably expect, therefore, will be that those glimpses into Nature which in the pages of Inspiration *are* given, shall not contravene existing natural phenomena, but there shall be seen, on the contrary, a consistency between the two ; the language of Scripture and the facts of Nature ever revealing (where they do each relate to the same subject) one and the same truth.

The eliciting such accordances cannot, surely, be a matter of indifference ; and the humble attempt that will now be made towards its manifestation in respect to the fact of the Earth's Antiquity may, at least, from the interest of its object, claim a favourable construction. Exceptions doubtless will, and probably may with justness, be taken to some of the explications about to be offered for the establishment of this Harmony, but it is hoped that this endeavour to maintain the *integrity of Scripture*, in consistency with the *full admission of geological phenomena*, will

be an effort in the right direction ; and may, at least, tend to shew that sufficient matters of coincidence may fairly be elicited from the Divine Record to induce a hope, that when this rich field shall be explored by abler and more diligent hands, all obstacles will vanish in a perfect accordance between the Works and Word of God.

Happily, in the present day, we start on such an investigation with this advantage—that the discovered phenomena of Geology no longer can be matters of sceptic doubtfulness ; the *inferences* deducible therefrom, alone, remain subjects of dispute. This is attested by the various Theories put forth by parties of all grades and sections in society, for reconciling those discoveries with the Mosaical Record—theories, no less numerous than many of them are opposite to each other in their nature and tendencies. For while, on the one hand, some have attempted so to accommodate the Geological Facts to preconceived interpretations of Scripture, as to fritter away the reality of those facts, or destroy their legitimate inferences ; others, on the other hand, have attempted so to accommodate the Scriptural Record to the natural phenomena, as to destroy its Divine integrity, and reduce its Inspired Truths to mere legendary Traditions or mythic Parables. Such schemes of accommodation, where the integrity of the palpable Record is compromised on either side, are no less unsatisfactory

than uncalled for. If the Harmony we seek issue not from the plain unsophisticated notes set down by the Divine hand before us, but is to be a mere *ad libitum* measure, varying with the imaginings of every sportive fancy, we can have no satisfying sound, no full-sustained note of concord; the strain produced may please for the moment, but will not strike that natural chord, which, be it ever so oft repeated, is ever pleasing and contenting, since it is ever perfect and ever true. This satisfactory result can only be insured where no infringement is made upon God's Revelation, whether disclosed in his Word or in his Works; both must be kept entire, *just as he has recorded them*, otherwise we shall only mar the music of their voices, in our futile attempt to produce a harmony by altering the Divine notation. Some few of the theories of interpretation that have, under the most eminent names in Theology and Science, been advanced, stand out in a very different category from those before alluded to; they clearly recognise this right principle of an entire conservation of the respective Records, although their individual systems may differ in the application of this principle, and may vary in their details; such portions, therefore, of their respective schemes will be adopted in the following exposition as may seem to form the most consistent whole.

The Scheme of interpretation, then—stating it

first in a general way—which, it is submitted, will best accord with the actual Natural facts, and with the precise terms of Scripture ;—is to view the first verse of Genesis as a distinct general proposition, simply declaratory of the original Creation in the beginning by God, of the constituent substances of this Globe, with the planetary system to which it belongs,—that is, the heaven and the earth. When this beginning was, whether recent or more remote ; or in what form, or under what substantial qualities this primeval creation took place, is not in the Record disclosed ; enough for all moral purposes, that we are therein instructed in that grand fact,—the foundation of all religion—the Creation of the world by God. But since there is, in the terms employed in this concise narration, no necessary connexion, *as to time*, indicated between this recorded primal creation, and that recent period to which the after-related Mosaic history specially refers, *time immeasurable*, and *changes illimitable*, may, without any force upon the Record, be interposed, wherein all those wondrous terrene evolutions, written with such indubitable evidence on the mountain-ranges of the Earth, and all those various races of organic life whose existences are revealed to our view in their embedded fossils, may, during ancient economies, have evolved their long periods of being. None of these epochs of the Earth's antique history, nor any of its grand

and various catastrophes, nor any of their results, are chronicled on the page of the Sacred Record. The Earth, with its attendant orbs, may have pursued, through epochs man cannot number, its various evolutions, under the governance of those perpetual laws affixed thereon by the Supreme Ruler,—rivers may have rolled their tranquil course, mountains may have arisen, the earthquake have produced its convulsive changes, vegetable glories have beautified the scene, and tribes of sentient creatures have lived their allotted day,—all unrecorded, save on those adamantine monuments formed of their own reliques; but none of these mighty operations in Nature's kingdom are inscribed on any written page, till we arrive at that period immediately succeeding the last terrestrial catastrophe, which occurred next anterior to a recorded renovation and replenishing of the Earth for the habitation of Man. Then the particular condition, which the Earth's surface in the locality referred to, assumed, becoming connected with Human interests, finds, by inspiration, a human historian, being graphically described in the second verse of Genesis. Therein such a disturbed condition of terrestrial things is narrated as at that time subsisting, as we should naturally conclude would be found after the violent action of one or other of those grand disturbing agents, either of fire by earthquakes, or of water by deluges, which we know to be Nature's ordinary mighty de-

stroyers and renovators on the Earth; viz. a condition of confusion and emptiness—it is *formless* and *barren*; and, consequent upon the extraordinary convulsion evidenced in this disturbance of the Earth's regular order and fruitfulness, a mist of darkness overspread the broken up and submerged surface, till some mighty Energy from God, brooding, as it were, over the disorganized mass, brought the obscured Earth again into new order and beauty. As a first result of this Divine fiat of renewal, the circumambient mist partially being dissipated, the rays from the obscured Sun feebly penetrated to the Earth, and *light* thus was experienced again on its o'ershadowed surface, and as a consequence dividing, with the darkness, *time* between them as heretofore, the first registered day of the Earth's new economy then preparing for Man, was hence evolved. The work of the new world's *second* day, as described in the sixth verse, was the dissipating and separating still further the incumbent aqueous mists, by the subsidence of the heavier particles thereof in Water to the Earth's surface, and the collection of the more ethereal portions of it into Clouds above. The atmosphere or air being thereupon admitted into the spaces thus vacated, a "Firmament," here called "Heaven," separates between the "waters" concentrated in the floating clouds above and the "waters" which by condensation had subsided below. A further Divine exercise of renewing

power is now put forth, in the preparation, of the disrupted and overflowed surface of the Earth, for the purposes of animal and vegetable life: this was effected by the gathering together of the spread-out Waters into their appropriate depository of a sea, so that the Dry Land, hitherto hidden by their wide overflow, might again appear. This being done, the Almighty volition educed from the now drained and visible Land its various vegetable tribes, “whose seed was in itself upon the Earth;” and thus was concluded the *third* day's work. On the *fourth* day the aqueous mists, whose shadowing influence had before interposed, being now by God's fiat entirely dissipated, the *Lights*, from whence the “light” on the first day was partially emitted, were hence rendered fully visible to the Earth; and further, had appointed to them their new uses and office in reference to the Earth's new inhabitant, Man;—the sun and moon being ordained to mark out to him the divisions of time, the changes of seasons, and other constituted ordinances. And thus the material matters of the Earth being perfectly refitted for its future course of continuous reproduction; and the revolutions of the heavenly orbs being designated to their new uses in the Human Economy; the work of replenishing the Earth proceeds during the *two* succeeding days, through acts of Divine creation and reproduction, by bringing into being the present Animal races, up to the creation of an entirely

new order of Beings, the highest of God's visible creatures—MAN—unknown before on the world's long-occupied theatre, yet ordained, now, to have dominion over all God's other works, and reflect his Maker's image in the noble exercises of an imperishable Soul.

Now here is an explication offered of the sublime matters revealed to us in the first chapter of Genesis, which, it is submitted, may be fully accepted, without the slightest force being applied to any single term used in the Sacred Record; while, at the same time, it is an explication which may stand in perfect consistency with the discoveries of Geology respecting the Earth's Antiquity: and thus harmonizing together, as it does, the *Word* and *Works* of God, may claim to be received as a satisfactory interpretation of the Almighty's creative operations, unless any other, better in accordance with the *letter* of the one and the *facts* of the other, may be produced. And should any one suppose that Holy Scripture must needs be *unfairly* accommodated, thus to be brought into this alleged coincidence, let them suspend their judgment, till there have been adduced those particular elucidations of the several verses of the Mosaic history, and those various authorities for the interpretation here offered, which, for the purpose of establishing the validity of this Harmony, will now be proceeded with. Those right principles of

Scriptural interpretation, in reference to natural objects, detailed in the first Chapter of this Work, must carefully be kept in view throughout this examination of the Mosaic history. The one of those principles, however,—which assumes to view the Divine Record as using the language of common experience, and giving its relation of natural facts only in accordance with popular notions and appearances,—although, no doubt, in some instances applicable in this place, no less than in other sacred narratives; and although, moreover, such legitimate mode of interpreting the phraseology used, doubtless would furnish a satisfactory explanation of many of the recorded matters; yet is its application required, in the narration of the acts of Creation, only as an auxiliary. The second of the principles of right interpretation formerly advanced, may, it is considered, more relevantly, be brought into application here, viz. *that our prior conceptions of the meaning of Scripture should receive modifications agreeably to more advanced revelations of Nature's Works*; and hence that a fair coincidence between the Inspired Record, and Natural phenomena, may, in the case of the Mosaic history of the Creation, be founded upon the *bare literalities* of the Sacred Text, when that text shall be traced to its primitive meaning, and be viewed by the light thrown upon it from analogous passages of Scripture.

It is well known that all languages have a tendency to decline from the primitive force of the words as originally used, and take a colouring from the notions of things entertained in successive periods; and hence the secondary sense of words comes oftentimes to supersede their primary signification, which is lost or obscured under the common usage. Instances of this change of meaning must be familiar in the modern use of many words in our own tongue; but more especially may this be expected, when we acquire our conceptions of the idea meant to be conveyed to us by certain words, only through the medium of a modern translation. In such a case, should a necessity arise for reconsidering and re-adjusting our common interpretation of any particular passages, presented to us in our vernacular version, then it is most important that we should trace out the original to its roots; view the application of its terms in parallel passages; enquire the sense put upon them by those persons living nearest to the time of their revelation, and their use by those most familiar with them as their own tongue; and thus take those best careful means for gathering "the Mind of the Spirit" from the Written Word, ever most likely to lead to its correct interpretation. Premising these remarks, the consideration of the particular terms employed in the Mosaical Record of the Creation may now proceed. It will, it is

hoped, be seen, that the legitimate sense derivable therefrom may satisfactorily accord with the claims of the Earth's Antiquity ; for that, be it understood, is the single geological fact which in this present investigation is sought to be established ; hence many interesting points, that incidentally may arise in the history, will purposely be passed over, as not bringing into question the sole matter of inquiry here instituted.

In the general sketch of the History of the Creation before given, as reconciling Scripture with Natural facts, it has been intimated, that the first verse of Genesis is not to be understood according to the currently-entertained notion, as merely giving a summary account of the *after*-recorded work of the six days, but is an *independent proposition*, enunciating THE CREATION, primordial as to time, the reference being retrospective rather than prospective.

“*In the beginning*” marks a definite period ; it is that august occasion in the circle of Eternity when the Almighty primarily called into being the materials composing the Universe, and affixed on them those laws for their continuous evolution, by which this World under His governance has ever since subsisted. It is necessary to fix this definiteness of period to the term, “*In the beginning,*” in order that it may convey some distinct conception relatively to the subject to which in the text it is conjoined,

“The beginning” is evidently not an absolute term, but relative, and must here, as elsewhere, have its scope determined by the thing spoken of, which in this passage is the “*heaven and earth.*” The phrase here therefore is equivalent to saying, “In *their* beginning God created the heaven and the earth ;” and we seem led backward by a consideration of the root of the Hebrew word (BERECHITH) here used, signifying a head or at the top—to a long antecedent period, for the execution of the creative act,—to the top of the column,—to the fountain-spring of the stream of time ; and from the remarkable parallel passage, where, in the pages of Inspiration, the same term, “*In the beginning,*” is used, that antecedent period would seem indeed to be placed at an inconceivable immensity of retrospective distance. For although, where St. John commences his Gospel with exactly the same words as Moses commences his Record, we must, from the Divine subject to whom the term “*in the beginning*” relates in the former case, understand it there to imply Eternity ; yet since the selfsame Spirit indited alike the Old Testament and the New, we seem warranted, by His application in the Gospel of the expression “*in the beginning*” to time *immeasurable*, to apply His other use of the same expression in Genesis to time *unmeasured* ; and moreover, to conceive that He thus strikingly indited the like expressions in both cases, because the period

He would indicate in Genesis, although not in reality equal to eternity, yet to our little minds it was a period, in retrospection so vast and overpowering, as to be almost as difficult for us to conceive. There is nothing to forbid, therefore, but, on the contrary, everything, in the term itself, to countenance, the belief that "in the beginning" we are to understand the period of the Earth's long antecedent primordial constitution; a view so altogether accordant with that lofty exclamation of the Psalmist, where alone besides in Holy Writ the same term in similar construction is used¹: "Thou, Lord, in the beginning hast laid the *foundation* of the Earth, and the heavens are the work of thy hands."

There is an exposition of this subject in a late Discourse on *The Mosaic Cosmogony*, which, as being strikingly confirmatory of the view given above, may here be quoted²:—

"Any terms more *illimitable* could not well be conceived than those which Moses has adopted—*In the beginning God created*. There is, indeed, no attempt or design *here* to fix the *chronology*, but only

¹ There are four other places where the same original term rendered "In the beginning," is used in the Old Testament, (Jer. xxvi. 1; xxvii. 1; xxviii. 1; xlix. 34): but in all these passages their period is unmistakingly determined by the construction of the context.

² *The Mosaic Cosmogony*, by Rev. T. Maude.

the *fact* of Creation. The space of time that elapsed between the *creation* of the earth and the *ordering* of it (so to speak) for the use of the present animated races, by Him *with whom a thousand years are as one day*, is not hinted at. *In the beginning!* We have the same expression used in the New Testament: *In the beginning was the Word*. By this expression in the former passage no limit is assigned; in the latter, none is even assignable. The *beginning* in the passage of Genesis is indefinite, and by its connexion with *creation* alone marks the non-eternity of the subject-matter. In the passage of St. John's Gospel, the *beginning*, as we see by its context, stretches back through the ages of an uncommencing eternity, as intimating the *uncreated* essence of Him who was *before all things—without whom was not anything made that was made—and by whom all things consist*. I note this point and compare the two passages to shew, by the very force of their disparity, the extent, only limited *within* the past eternity, of the term assigned in Holy Scripture to the period of the *first* work of material creation; and to shew that geologists are, therefore, at perfect liberty, so far as the Sacred Record is concerned, to assign what chronology they please to the *framework* of our *planet*."

There is another explication of this term, "*In the beginning*," furnished in Dr. Harris's *Pre-Adamite Earth*; which, although equally establishing a long

antecedent creation, yet, since it appears to refer the expression in Genesis and in St John's Gospel to precisely the same period, can hardly, from their respective contexts, be deemed allowable.

“In the opening verses of St. John's Gospel we read, ‘In the beginning was the Logos, and the Logos was with God, and the Logos was God. All things were made by Him.’ Here, it is evident that the design of the Sacred Writer is to affirm that, before anything existed *ex extra*, the Logos existed; for his object is to prove that everything was brought into existence by the Logos. If Scripture, then, is to be its own interpreter, we must infer that the phrase, *in the beginning*, as employed in the book of Genesis, takes us back to the same period. And this conclusion becomes inevitable when we observe that, in using this phrase, the Gospel designedly, and for obvious reasons, imitates the history. If the Mosaic use of the phrase, therefore, does not take us back to a period prior to the origination of matter, it cannot be justly inferred that the Apostolic sense of the phrase does; but that the ‘all things made by Him’ excepts matter, *i. e.* that matter was not made by Him, and that He did not exist before it.”

Here the argument seems built upon the inference that the “*all things made by Him*,” is identical with the term “*created*” in Genesis; but the former phrase surely includes very much more. The Bible

ascribes to the Logos the making of *all* created things—the angels, and all other conceivable existences;—whereas the record in Genesis is limited to “the heavens and the earth”—the Hebrew phrase for the visible universe—which may have been a much later creation than other celestial, or even material things. It seems better, therefore, to consider the term, “In the beginning,” as governed by the subject-matter predicated, only letting the analogous expression by St. John furnish a clue to the amplitude of retrospective period to which in the Mosaical Record it may be referable.

The consideration of the succeeding term “*created*” may confirm the preceding interpretation. The Hebrew word (BARA), translated “*created*,” has invariably a sense indicative of a primal act of Omnipotence, and is by no means ordinarily identical, in its use, in the Pentateuch, with the cognate Hebrew word (ASAH), translated “*made*,” which is not invariably applied to Divine agency; but is used with a latitude of signification oftentimes inclusive of formation, or reconstruction;—the latter may be done by man, the former by God only. There are ten passages in the Pentateuch in which the word (BARA) is used¹, in all of which the agent is, uniformly, the

¹ Gen. i. 1, 21, 27; ii. 3, 4; v. 1, 2; vi. 7. Num. xvi. 30. Dent. iv. 32.

Divine Being—"Matter is endued with its essence and its form; animal being receives its development; the immaterial soul is transfused into man; a new creature is brought into exercise;—all by acts which, though it were improper under the circumstances to call miraculous, we rightly denominate specially creative¹." Whereas in many instances of the use of the word (ASAH), the agency of man is indicated, and there is not necessarily implied an act of primal creating, even when it refers to God; but it merely means *constituted*, or *appointed*; *set* for a particular purpose or use. Thus it is said, God "*made* Joseph a father to Pharaoh;"—"made him Lord of Egypt;"—"made the Jordan a border between the tribes;"—"made David the head of the heathen." Although, therefore, the word (BARA) may not in itself imply the making out of nothing, yet it is employed in the Sacred Record with such singularity of philosophic precision, as to claim a distinction of interpretation of superior force to the cognate word (ASAH),—a distinction very important to be marked, if we would attain to any exactitude in the interpretation of the Mosaic history. We find the terms (BARA), "*created*," used in some subsequent verses of this first Chapter in reference to the calling into being of "whales," and of other

¹ Kennedy's *Donnellan Lectures*.

animals ; and more especially in reference to the formation of Man ; but all these creatures here spoken of may have been in a sense primal creations—new beings, adapted to the then newly-formed Economy of the Earth, just as Geologists trace distinct creations of new races of animal life in the successive Formations constituting the several progressive economies of the Earth's archaic history. There seems, indeed, in this part of the Divine Record, one of those many beautiful instances of precision of language in the Sacred phraseology, so perceptible throughout the Mosaic history ; for whereas the several Works of the four days preceding the fifth day would seem to reveal a reproduction of existing things, a re-organization, or a fresh appointment to some new uses, and hence all have their action accurately described by a term of Divine volition, "*Let there be,*" or by the term (ASAH)—"*made,*"—here, on the contrary, where something *new* in Being or in Constitution is the subject in hand, the term "Created" is, with beautiful precision, used. It may be observed, further, that in the account given of the formation of Man, the term *created* and the term *made* are both employed, and, in consequence of this, some persons have supposed that the two may be considered as convertible terms ;—but not necessarily so : so far from it, indeed, that the same precision of language would appear to be

discoverable, and the same distinction of idea to be open to notice, here, as elsewhere in this precise Record: for while MAN, as being undeniably a new creature, has properly the term *created* applied to his production, yet as he is expressly said to be formed "out of the dust of the earth," he has also applied to him the term *made*. And this singular distinctiveness of application in these two terms may, also, it is conceived, further be traced in that summary of the *whole* of the mighty six days' work of God detailed in the first chapter of Genesis, which is given in the early verses of the second Chapter, where at the first verse the connexion with the matter of the preceding record being specially marked by the introductory word "*Thus*," a brief allusion is then made to the operations therein revealed, which, with an exactitude of distinctive phraseology to embrace the *whole* that had been done, are described as having been "*CREATED and MADE*."

There is another passage also which, in remote reference to this point, may be noticed, and the more especially since to some minds it has presented a difficulty in admitting the first verse of Genesis to reveal a distinct general creative work, anterior to the more detailed six days' work of the subsequent history. The passage referred to is in the Fourth Commandment, where it is declared, "*for in six days the Lord made heaven and earth, the sea, and all that*

in them is, and rested the seventh day." Now, it may be observed, that the term employed in this passage is not (BARA), *created*, but (ASAH), *made*,—and the special work of God here spoken of is expressly His *six days' work*. There is not anything, therefore, in the declaration of this Commandment that literally and necessarily refers to the particular operation of God as recorded in the first verse of Genesis: quite the contrary, His act of *creating* "in the *beginning*" does not seem embraced in the terms there used: for the term "heaven and earth," which we find in the Commandment is, (as will hereafter be shewn), only a common Hebraism, to express the then existing visible World—the World as in being at the period when that term may be used. We must take the passage in the Commandment, therefore, simply and literally as it stands, and not stretch it beyond its own Record, and then any supposed difficulty in harmonizing its terms with the true order of the *whole* creative work of God, both ancient and more recent, will disappear; for the general primordial exercise of Creation recorded in the first verse of Genesis, and the state of the disrupted earth recorded in the second verse, not being specifically included within the declaration in the Decalogue, the authoritative argument of the Fourth Commandment will remain in all its imperative force, grounded on God's particular glorious six days' work; while any conceivable ante-

cedent epochs of time may be admissible to our conceptions, for prior exercises of God's creative power.

In conclusion, on this point, there may be quoted the following extract from *Critica Biblica*, Vol. I. p. 24:

“The Hebrew word (BARA), translated ‘created,’ denotes, says Parkhurst, the production either of substance or of form, the creation or accretion of substance or matter; here it must denote to create, to produce into being. The Rabbins, says Dr. A. Clark (*in loco*), who are legitimate judges in a case of verbal criticism in their own language, are unanimous in asserting that the word (BARA) expresses the commencement of existence of a thing, or its egression from nonentity to entity.”

So that it would appear we are warranted in understanding the act of CREATION, revealed in the first verse of Genesis, as the *original formation* of the substance of this world, in such primitive forms, we may conceive, as is thus expressed by the illustrious Newton in his Queries subjoined to his *Optics*.

“It seems probable to me that God in the beginning formed matter in solid, massy, hard, impenetrable, moveable particles; of such sizes and figures, and with such other properties, and in such proportions to space, as most conduced to the end for which he formed them. . . . By the help of this principle all material things seem to have been composed of the

hard and solid particles above mentioned, variously associated in the first creation by the counsel of an intelligent agent; for it became Him who created them to set them in order."

This, then, is what is revealed as created "in the beginning," under the term "*the heaven and the earth*," viz. THE PRIMEVAL SUBSTANCE OF THE MATERIAL WORLD; for the ancient Hebrews, as Bishop Pearson observes, "having no word in use among them singly of itself signifying *the World*, they therefore used in conjunction the term '*the heaven and the earth*,' as the grand extremities within which all things are contained, implying the Visible Universe as it may exist or appear to view at the several periods to which the words when used may refer."

With reference, therefore, to this term, "*the heaven and the earth*," as used in the first verse of Genesis, the following extract from *Critica Biblica*, Vol. I. p. 25, may suffice:—

"The Hebrew prefix (ETH) which is placed before the Hebrew word signifying *heaven*, and also before that signifying *earth*, is understood by the Rabbins in a very extensive sense. The particle (ETH), says Aben Ezra, signifies the *substance of a thing*. The like definition is given by Kimchi in his book of roots. This particle, says Ainsworth, having the first and last letters of the Hebrew Alphabet in it, is supposed to comprise the sum and substance of

all things. The particle (ETH), says Buxtorf, with the cabbalists, is often mystically put for the beginning and the end, as A (alpha) and Ω (omega) are in the Apocalypse. On this ground, these words should be translated; God in the beginning created the *substance* of the heavens and the *substance* of the earth, *i. e.* the *prima materia*, or first elements, out of which the heavens and the earth were successively formed. The Syriac translator of the Bible understood the word in this same sense, and to express this meaning has used the word (YOTH), which has this signification, and is very properly translated in Walton's '*Polyglot*'—*Esse cœli et esse terra*, the being or substance of the heaven, and the being or substance of the earth. St. Ephraim Syrus, in his comment on this place, used the same Syriac word, and appears to understand it precisely in the same way."

The learned Bp. Patrick also, in his *Commentary*, says:—"The Hebrew particle '*eth*' put before '*the heavens and the earth*' signifies as much as '*with*,' if Maimonides understood it aright, and makes the sense to be this; He created the heavens with all things in the heavens, and the earth with all things in the earth: certain it is these two words comprehend the whole Visible World."

Sufficient authority, it is conceived, has thus been adduced for interpreting the first verse of Genesis as a distinct absolute proposition, declaratory of the *pri-*

meval construction of the Substance of the World we inhabit. Whether this was recent or remote, the Record itself does not explicitly tell; but it is satisfactory to our argument to discover, that the scope of the terms used leans manifestly to a long anterior period; and thus, according to the strict literalities of the text, an IMMEASURABLE ANTIQUITY OF TIME may, without impropriety, be involved within its revelation.

But that an antecedent state of the Earth existed, before the recorded Mosaical Epoch, will more clearly come out to view by the consideration of the terms used in the *second* verse of the chapter. This verse, according to the currently-received interpretation, is supposed to reveal that condition of *Chaos* in which it is thought the original materials of the world were, after their immediate creation, subsisting before they were reduced to order, and formed into that, in the opinion of some, only recognizable state of the world, now at present existing. Whereas the interpretation which is now offered as the true explication of the facts, represents this verse as describing that disorganized state of a previously existing Earth, following upon the *last* catastrophe which had disturbed its surface, anterior to the period of its Divinely-recorded reorganization for the abode of Man. The space of time that may have intervened between the matters revealed in the first verse of Genesis and

those revealed in the second verse, may have been, for aught the Record indicates to the contrary, immeasurable; for there is nothing that necessarily connects the subject of the two verses together in *immediate* approximation of time. It has been said, indeed, that being connected with its antecedent by the conjunction "*and*," precludes the intercalation of any long period of time between them; but *and* is not a determinate meaning of the Hebrew word (VAU), so translated in our version; it may have many other renderings; and in the first two chapters of this very book of Genesis, this same copula is, in fact, rendered in our Authorized Version, by the several words "*but*," "*thus*," "*now*," and "*also*." We are at liberty, therefore, to adopt that rendering most conformable to the matter recorded, and selecting the conjunction *but* or *now*, the second verse then stands as introducing a subject separate as to time from the first. Dathe, who is high authority in such a matter, says the correct rendering should be, "In the beginning God created the heaven and the earth, *but afterwards* the earth became waste and desolate."

Nor is there any ground, in the terms used, for considering the subject-matter of which this second verse treats to be a *Chaos*. This chaotic condition of the Earth at this period is altogether a gratuitous assumption, unsupported by the literal text. Indeed, like as many of our conceptions of the Spiritual

world are erroneously derived from Milton, rather than from the Bible ; so many of our common notions of the primitive Natural World are derived from the Heathen Poets, rather than from the Revelations of God's Word and Works ; and this notion of a Chaos evidently among the rest. Some of the learned, reading in the pages of Hesiod or Ovid of this poetic fiction, have transfused the idea into the general mind ; but what is there in the terms used in this verse, beyond what might be justly applied to, and describe a condition of the surface of the earth lately broken up and laid waste, after one of those natural convulsions, of which we have the indications of so many, within the range of the Earth's archaic history ; and of one of which, to a slighter extent, we subsequently have had the experience, within the range of our own more recent history, in the recorded catastrophe of the Deluge ?

The revealed condition then of "*the Earth,*" after the last pre-Adamite catastrophe,—"*was without form, and void, and darkness was upon the face of the deep ; and the Spirit of God moved upon the face of the waters.*" The first point that may strike us in this delineation of the then state of things is, that there was at that period, according to the express Mosaic record, anterior to the six days' reduction into order,—*existing earth, and existing water*,—since both are here spoken of distinctively. The idea appears at once,

therefore, excluded of a purely *chaotic* mass, its materials commingled, and its primal substances as yet un-reduced to an organized condition of individuality. Nor do the Hebrew terms (TOHU—VAVOHU), rendered in our Version “*without form, and void*,” in any proper sense sustain the notion of a chaos. The force of the original word (TOHU), significantly expresses *dreariness*, or a *waste*—that of (VAVOHU) expresses *desolation*, or *without inhabitant*. Bishop Patrick says, “these words are synonymous with *confusion* and *emptiness*,” and the Septuagint renders them by *invisible* and *unfurnished*. And this idea of desolateness is fully carried out in all the twenty-one different passages in which the same terms are used in the Old Testament, as, for instance, may be seen Deut. xxxii. 10, Isai. xli. 29, Jer. xlvi. 18, 19, Jer. xlix. 2, Jer. iv. 23. In that beautiful Song of Moses, recorded in Deut. xxxii. 10, in which he describes the miseries of the barren wilderness, the word (TOHU) is used to express its desolateness, “He found them in a desert land, and in the *waste* howling wilderness.” And there is another striking passage in Jer. iv. from the 23d verse, in which these same terms (TOHU VAVOHU) are used; and so singularly descriptive is it of what we should conceive would be the wrecked condition of the Earth’s surface, after some violent disruption, that the whole prophetic vision may be quoted, as well illustrating the

proposed view of the subject. "I beheld the earth," says the Prophet, "and lo! it was *without form, and void*; and the heavens, and they had no light. I beheld the mountains, and lo! they trembled; and all the hills moved lightly. I beheld, and there was no man, and all the birds of the heaven were fled. I beheld, and lo! the fruitful place was a wilderness, and all the cities thereof were broken down; at the presence of the Lord, and by his fierce anger. For thus hath the Lord said, The whole land shall be desolate; for this shall the earth mourn, and the heavens above be black." Here in this beautiful strain of imagery, by which the Prophet shadows forth the political ruin of Judah and Israel, we have a vivid picture drawn of the Earth's confusion and dreariness: here we have light forsaking the heavens; the extinction of animal and vegetable life; a series of catastrophes indicated in the trembling mountains, and the moving hills, the mourning of the Earth, and the blackness of the heavens;—deformity has usurped the place of beauty, desolation of order. And what are the special terms used to indicate this disorganized scene, but (TOHU VOHU,) "*without form, and void*," as expressed in this second verse of Genesis?—descriptive there also, we may hence believe, not of an un-reduced chaos, but of a disrupted, desolated, previously-existing Earth.

And not less is the same idea indicated in the

next terms used in this verse, "*And darkness was upon the face of the deep.*" The commonly-entertained notion is, that this is an extension of the description of the Chaos in which the elements of darkness and light, and all other things, being as yet undeveloped, are commingled in an abyss called "*the deep.*" But the term darkness here used means merely a temporary obscuration. The root given of the original word translated "*darkness*" is *stagnation* (of atmosphere), a sense, as we shall presently see, very significant of its real meaning. Indeed, darkness can in no case express an absolute thing, but implies only an absence of light; and we may clearly infer what is meant by the "*darkness,*" in this passage, by noticing its nature, and the means of its effectuation, as recorded in some other passages of Scripture. In the description given in the fifth Chapter of Deuteronomy, ver. 23, of the promulgation of the Decalogue from Mount Horeb, it is said to have been delivered "out of the midst of the fire, of the cloud," and "out of the *darkness;*" for it is added, "the Mountain did burn with fire." Hence, the change of expression we find in the twenty-fourth verse, "We have heard his voice out of the midst of the fire." Add to this solemn account, the description given of this same awful scene in the twentieth chapter of Exodus, "And all the people saw the thunderings, and the lightnings,

and the noise of the trumpet, and the mountain smoking ; and when the people saw it, they removed, and stood afar off." Now, it can hardly be doubted that all this description sets before us the convulsions of a sublime earthquake, called forth into exercise to give awful impressiveness, by its astounding phenomena, to the delivery of the Law—an earthquake, of which *darkness* was then, as we know it ordinarily is now, one of the natural concomitants. Indeed an obscuration, extending for many thousand miles, has oftentimes been recorded, in our own day, as the result of recent volcanic eruptions ; and especially when volcanic force has upheaved the bottom of the sea, vapours, dense, continuous, and vast in extent, have suffused such large portions of space, as to have obscured, for a long period, the Sun from view. And what is that "*deep*," upon the face of which this "*darkness*," recorded in Genesis, is said to rest ? If Scripture is allowed to be the interpreter of Scripture, a satisfactory reply may soon be afforded ; but one that yields no countenance to the notion of the term "*the deep*," indicating an universal abyss, or chaotic mass. The original word, here rendered "*the deep*," is found in seven other places of the Pentateuch besides this¹. Two of these passages

¹ Gen. vii. 11 ; viii. 2 ; xlix. 25. Exod. xv. 5, 8. Deut. viii. 7 ; xxxiii. 13.

refer to the great Deep, the fountains of which are said to be broken up, (probably disturbed by an earthquake), to produce the Noachian Deluge; two other of these passages indicate the Waters of the Ocean generally; and in the remaining three the term "*the deep*," is limited to the Red Sea, and to Rivers. What ground, then, is there, excepting popular notions, for ascribing any other interpretation to the term, "*the deep*," in this passage of Genesis, than that which the Author of the Pentateuch ascribes to it, in every other passage he wrote, viz. the then existing *masses of water*?

The succeeding terms of this verse admit of a like unambiguous natural explication, recording that "*the Spirit of God moved upon the face of the waters*." When we consider the conciseness, while at the same time the precision, used throughout this sublime Record, we may be sure there is no tautology in the description, and the word in this latter clause rendered "*waters*," cannot be, merely, a repetition, as is generally supposed, of the word "*deep*," used before. A very definite explication, moreover, of the term "*waters*," is furnished by Moses, in this same Chapter, where, in the ninth and tenth verses, he speaks, again, concerning "*the waters*," and, from the description of the process there recorded concerning them, it is clearly indicated, that what is

meant thereby, is a mass of dense aqueous vapours incumbent on the overflowed Earth, and enveloping the surface in darkness.

Upon these dense watery vapours,—the consequent results, we may conceive, of the previous terrestrial convulsion,—it is said, “*the Spirit of God moved.*” There are very many meanings given to the Hebrew word (RUACH), like as, is well known, there are also to the translation thereof, “*Spirit.*” The root of the word, however, implies merely *breath*, or *wind*; and many able biblical critics maintain, that the term, as used in this passage, means simply a mighty wind, since we find it thus rendered, in our own Version, in Genesis viii. 1, in relation to the catastrophe of the Noachian Deluge; “And God made ‘a *wind*’ (Hebrew RUACH) to pass over the earth, and the waters assuaged;” and what reason is there why the same translation, *wind*, should not be given to the same word in the passage now under consideration; especially if, according to our explication, the subject acted upon resulted from some such-like submerging and disorganizing catastrophe? That it is called here “*the Spirit of God*” does not alter the probability of this, since the addition of a name of God to a noun, by a common Hebrew idiom, only indicates it to be in the superlative degree, so that the adjunct *mighty*, or *extraordinary*,

would meet the full requirement of the Hebrew text¹. Others interpret the word "*Spirit*," of the Divine agency, efficiency, or energy, as it is rendered, for instance, in Psalm xxxiii. 6, "By the word of the Lord were the heavens made, and all the host of them by the *breath of his mouth*." Again, Psalm civ. 30, "Thou sendest forth thy *Spirit*, they are created, and thou renewest the face of the earth." And out of eighteen texts in the Pentateuch in which the word (RUACH) occurs, in six of them the undoubted sense is, Divine intelligence, or power: whether by the third Person of the ever-blessed Trinity, as being the instrument of all spiritual life and energy, and so, by analogy, the efficient cause of natural revivification—the Record itself in its literality does not indicate; nor is it needful to our present purpose to determine. Thus much we discover plainly concerning this "Spirit of God," by the terms used in connexion with it, that its exercise was evidently of a vivifying or renovating nature, the word rendered "*moved upon*" implies a *supervolant motion*,—a *hovering over*; and hence the kindred sense of incubation. And this idea of brooding over is beau-

¹ Many instances of this may be noticed, as in Gen. xxiii. 6: *Nisee Elohim*, a prince of God, *i. e.* a mighty prince. *Naph-toolay Elohim*, the wrestlings of God, *i. e.* mighty wrestlings. Psalm lxxx. 10: *Arsay Elohim*, the cedars of God, *i. e.* great or high cedars.

tifully applied, by the use of the same word, in the description given in Deut. xxxii. 11, of the ever-present protection of God over the house of Israel: "As an eagle stirreth up her nest, *fluttereth* over her young, spreadeth abroad her wings, &c., so the Lord alone did lead them." The word translated "*moved*" occurs but once again in Scripture, in Jer. xxii. 9. But from the tradition of its implied meaning, has no doubt arisen the fable of a Mundane egg, as the origin of the World—a fable which has found its way into the Chinese and Hindu Mythology, and has beguiled the Egyptians to represent their God with an egg proceeding out of his mouth; giving rise to the famous fiction of Orpheus's Song.

From the whole consideration therefore of this second verse, the legitimate, literal interpretation would appear to be, that the Earth was, at this period, when the Mosaic narrative of the present Economy commences, found in a confused and desolated condition, indicating the result of some late terrestrial convulsion. Consequent upon this, a preternatural obscuration of light had settled upon the outspread waters, but an Almighty energy being put forth, to act upon the incumbent aqueous vapours, that beautiful Economy of terrestrial things now existing was caused, by successive operations, to emerge, which Moses goes on to relate, as the work of the succeeding six days; God putting in action both the agency of

His pre-ordained laws, and the exercise of His fresh-creative power, for the Earth's recorded reorganization and replenishing.

The first of these renovating results is recorded in the *third* verse, in that sentence of lofty simplicity, "*Let there be light, and there was light.*" In no particular perhaps of the Mosaic history does the popular notion stand more opposed to the literal force of the terms used, as well as to the facts of the case, than in the common interpretation of this sublime passage: the common opinion is, that it reveals the Almighty fiat here first creating *Light*. It seems almost a heartless act to attempt, by scattering this delusion, to interfere with a cherished idea, that has long so pleasingly filled the mind, no less with a sense of beauty, than of wonder. Yet Truth, after all, is the most sure source of delight; and what is there, in a plain candid view of the terms employed in this passage, that necessarily indicates any such meaning as a *first creation of light*, or which necessarily implies, indeed, that light was not previously existing? In fact, the consideration is submitted, whether, in a proper sense, Light is a subject that can be said to be *created* at all, since recent discoveries have determined that it is not in itself a material substance, but merely an effect consequent on the undulations of the æthereal fluid; so that darkness and light are but relative terms, signifying

severally the action, or the rest, of that effect. But, taking the words simply as they appear on the Sacred Record, they necessarily claim no higher meaning than this—that *there should be light, where there then was darkness*. The expression is equivalent to “*Let light come,*” or “let light be experienced:” whence derived, this passage of the Record says not; but the preceding verse points out the agency and the means, by informing us of the energetic action of “*the Spirit*” upon the watery vapours, which, thus, being somewhat dissipated, the rays from the Sun penetrating through, shone again upon the void and formless Earth; and hence the darkness which was over the face of the deep became, *partially*, scattered. Not indeed entirely—that was left for completion till the work of the fourth day, but sufficiently so to mark the revolution of time, so that by the division of the day from the night (which while the total darkness supervened could not be discovered) the notation of the first day of the renewed World might be recorded. And this diurnal division God appointed to continue; for it is recorded in the fourth and fifth verses, that “*God divided the light from the darkness;*” that is, according to the Hebrew, *separated* between the light and between the darkness, by *calling* the one Day, and the other Night. But since this division necessarily indicates the fact of the revolution of the Earth on its

axis, whereby the one was by the reflexion of the solar rays caused to succeed the other;—an unanswerable argument, hence, seems furnished for the prior existence of the Sun: how otherwise could there be a first, second, and third day, specifically measured out, and filled each with its allotted operations, before the work of the fourth day, unless the sensible reflexion of that luminary had, from the first, marked these diurnal vicissitudes?

The next work of renovation, as recorded in the *sixth* verse is, “*God said, Let there be a firmament in the midst of the waters, to divide the waters from the waters.*” Here are “*the waters*”—the same word exactly—spoken of in the second verse, as contemporaneous with the void and formless Earth, before the first day’s work of renovation began; and it is evident from the particular operation in respect to these “*waters*” here, in this present passage recorded, that this term describes a mass of aqueous vapour—a thick mist: this, by the action of a great wind or body of air, being set in motion, the heavier parts, condensing, fell, as water upon the earth; while the lighter parts, ascending, formed clouds above—Scripture language, in several places, designating these clouds as “*waters*,” as in Psalm civ. 3, “Who layeth the beams of his chambers in the *waters*, and maketh the clouds his chariot.” And Jeremiah x. 13, “When he uttereth his voice, there is a mul-

titude of *waters* in the heavens." Between these two, then, the floating waters or clouds above, and the condensed vapours or waters subsided to the surface below, the air or atmosphere interposing constituted the "*firmament*," which God is here pleased to call "*heaven*." That the "*firmament*" here spoken of is the atmosphere, or circumambient air, is universally admitted; the Hebrew word (RACHEA), rendered "*firmament*," properly signifying a body expanded, or spread forth like a curtain; but there is nothing in any of the terms employed in this passage which, necessarily, indicates that this atmosphere was *at this time* first created, or was not existing before. The expression "Let there be a Firmament," or an "*expansion*" of air in the midst, or, more correctly, according to the Hebrew, "between the waters," to divide the waters above from the waters below, only implies, in its plain literal construction, that the air was brought to perform this office of thus making the recorded division *here*, where, from the accumulation of the lately-dissipated thick misty vapour, it had locally been obstructed in its ordinary function. Nor, further, is there anything in the Record which implies, that, because, on this occasion, by the vacuum caused by the condensed "*waters*," the "*firmament*" was described as now introduced into the lower aerial region,—we, therefore, are to understand that it *only* existed there, and was

not much more expansive. We know that the clouds float sometimes very low, at other times in far higher regions;—all that the terms here used require is, that the firmament did then intervene between these newly-formed clouds and the earth; that it did not also extend around them, and above them, is not alluded to; the very nature of the subject in hand would itself imply the fact that it did so. Besides, the term “*heaven*” is used to designate the *firmament*, which would seem to imply a very wide expansion of space, since in the fifteenth verse it is said, God set the two great Lights “in the firmament of heaven.” On this latter point the following judicious remarks are made by Professor Bush, in his *Commentary (in loco)*.

“The original word for ‘firmament’ comes from a root signifying, primitively, *to beat, to smite or stamp with the feet*: hence, *to spread out by beating*, as thin plates of metal, and, finally, *to stretch out, or expand*, as a curtain. The sense of ‘expansion’ is undoubtedly prominent in the present use of the term, yet subordinate to this is the idea of a ‘firmament,’ or that which firmly supports an incumbent weight, as the atmosphere does the masses of watery clouds above. But since the aerial regions, by an illusion of the senses, *seem* to extend to the heavenly bodies, therefore the Sun, Moon, and Stars, are said to be placed in the firmament, though, in reality,

removed to immense distances beyond it. It is the usage of the Scriptures to describe the things of the natural world *as they appear*—as they strike the eyes of plain unlettered observers; accordingly, in former ages, before the true structure of the Solar system was understood, the idea naturally suggested by the word firmament, was that of the *blue vault of heaven*; but now that our superior knowledge enables us to correct the impressions of the senses, we interpret the term with stricter propriety to the extensive circumambient fluid, the atmosphere, or, rather, of the region which it occupies.”

The next process of renovation, as recorded in the *ninth* verse, reveals God saying, “*Let the waters under the heavens be gathered together unto one place, and let the dry land appear.*” This portion of the Record has been commonly supposed to represent the creation—as distinct, individual matters—of Earth and Seas; how erroneously need hardly be expressed, after the notice which has already been taken of the distinct enunciation in the second verse, of *Earth* and of masses of *Water* under the term “the deep,” as *then* already existing, before the six days’ work of renovation began. The “*waters under the heavens,*” here spoken of, are evidently the subsided “waters” described in the preceding day’s work, together with the overflowing waters, under the term “the deep,” that had submerged the surface of the

earth ; and the action now recorded concerning these “waters” is, that they should no longer be spread over the surface, but be gathered, probably by some local subsidences, into large masses or seas, that thus being *drained off*, the “*dry land*” might appear, or *be seen*—as the word properly implies—having, before such drainage, been hidden, or covered over by the watery flood. Here evidently is no creation, properly so called ; not even a making, but merely a constituting, or act of renovation, exercised through an operation of Nature, in order to bring the earth into its ordinary state, for the performance of its natural functions ; for this we find was the immediate effect of the related proceeding—the Earth was called upon by God to resume its fruitfulness—“*Let the earth bring forth grass, the herb yielding seed, and the fruit-tree yielding fruit after his kind.*” It may be only necessary on this passage to make a remark, similar to some that have preceded, that with respect to this work recorded as done, in the *eleventh* and *twelfth* verses, there is nothing therein related necessarily indicating that “grass,” and “herbs,” and “trees,” were now for the first time created ; the earth brought them forth at the Divine command *then* ; what is there said that precludes the circumstance that the earth may not have brought forth like vegetable tribes *formerly* ? all that is precisely indicated is, that the lately-drained

Land assumed its wonted fertility, and was replenished with vegetable beauty. Indeed, the peculiar terms employed in reference to this proceeding might, possibly, directly indicate a re-germination of preceding vegetation, since the act of Divine volition here recorded is, that the earth shall bring forth grass, &c., *whose seed is in itself upon the earth.*

The *fourth* day's work, at which we now arrive, as recorded in the *fourteenth* and following verses, is currently supposed to reveal the original creation of the Sun, Moon, and Stars—" *Let there be lights in the firmament of the heaven.*" It is important to observe, that the Hebrew word (MEOROTH), here rendered "*Lights,*" is different in its meaning from the word rendered "*light*" in the third verse, shewing the beautiful perspicuity of the Sacred Record. The word used in the present passage denotes, not *light in itself*, but an instrument or means of light, an *enlightener*, or light-producer, or light-bearer. Now the act of Divine volition here recorded concerning these Luminaries, or light-bearers, does not necessarily preclude their pre-existence, but simply indicates their being now rendered visible from the earth, and appointed to perform a *new office* in the now newly-constituted Human economy. In elucidation of this view, another Note (*in loco*), from the valuable annotations of Professor Bush, may be quoted,

and this the rather, as he by no means appears to be a disciple of modern geological science.

“It is unquestionable that the Scriptures generally describe the phenomena of the natural world *as they appear*, rather than according to strict scientific truth: thus, the Sun and Moon are said to rise and set, and the Stars to fall, &c.; consequently, if this history of the Creation were designed to describe the effects of the six days' work, *as they would have appeared to a spectator, had one been present*—a supposition probable—then we may reasonably conclude that the Sun was formed on the first day, or, perhaps, had been created even *before* our earth; and was, in fact, the cause of the vicissitudes of the three first days and nights. But as the globe of the earth was during that time surrounded by a dense mass of mingled air and water, the rays of the Sun would be intercepted; only a dim glimmering light, even in the day-time, would appear, and the bodies of the heavenly luminaries themselves would be entirely hidden, just as they now are on a very cloudy day. Let it be supposed then, that on the fourth day the clouds, mists, and vapours, were all cleared away, and the atmosphere made pure and serene. The Sun, of course, would then shine forth in all his splendour, and to the eye of our imagined spectator would seem to have been just created; and so it might be of the Moon and Stars. This effect of the Divine

power, according to the usual analogy of the Scriptures, is described from its appearance, and the language ‘Let there be Lights in the firmament,’ and ‘He made two great Lights, and set them in the firmament,” is to be interpreted on the principle above stated. They might then be said to be *made*, because they then first began to be visible, and to perform the office for which they were designed. The original word rendered ‘*made*’ is not the same as that which is rendered *created*. It is a term frequently employed to signify constituted, appointed, set apart for a particular purpose or use. As the Rainbow was constituted or appointed a sign, though it might have existed before, so the Sun, Moon, and Stars, may be said to have been made, and set as Lights in the firmament on the fourth day, though actually called into existence previously. The same results had been *really* effected, by the same means, during the previous three days and nights, but these luminaries were henceforth, by their rising and setting, to be the *visible* means of producing this separation, or succession.”

It may further be remarked on this point, that, evidently, some things are represented in this passage only according to their appearances, since we find the *Moon* spoken of as a “great light,” in the same manner as the Sun. But as Dr. Nares, in his learned work on this subject, remarks:—

“ I am not in the least put out of my way by the Moon being called a *great light*, set in the heavens to rule our night, for undoubtedly it is so to *us* ; nay, to the bulk of mankind it is (if I may so say) so revealed to their senses ; and if the Word and Works of God are to be expected to confirm each other, it is more consonant to the visible works of God, to describe it according to its obvious uses, than if it had been pronounced to be an opaque globe of earth, reflective only of the sun's beams. If I was to grant then, which I do not, that Moses had written in some respects unphilosophically, I should yet contend, that in the case before us, considering how the works of God appear to our unassisted faculties, the heavenly bodies could not have been otherwise described, consistent with the relations they bear to this particular planet.”

But although this mode of reconciling the terms employed in this portion of the Record,—by adopting the legitimate principle of interpretation in such cases, of reading them according to the language of appearances,—may be sufficiently satisfactory ; yet, since every other part of this Mosaic history has, hitherto, received a coincident explication with the fact of an archaic Earth, by simply regarding the literalities of the text, so it may be well to see if this fourth scene also in the great drama of the Mosaic Creation, may not yield its concurrent voice to the

harmony of God's revelations, on this same sure basis also.

It has been suggested by some Biblical critics, that the tenses of the Hebrew not having a determinate application in themselves, but the requirements of the context chiefly determining the *time* they express,—whether the verb in the particular texts now under consideration might not be fairly rendered in the pluperfect, and, so the passage stand thus: *God HAD made, God HAD set.* But the propriety of this rendering in the present case may be doubtful, and besides, is uncalled for: the right explication may be found on the face of the Record itself, simply as it stands in our version; for where is there fairly to be discovered therein any act of primal creation indicated in relation to the subjects there predicated? In the *fourteenth* verse the expression, “*Let there be Lights in the firmament of the heaven,*” by no means, in its literal signification, implies that these *Lights* are then for the first time called into being; the terms employed only necessarily indicate that these luminaries should become visible and available where they had been obscured, and consequently suspended in their functions before; and this their visibility being accomplished, then in the *sixteenth* verse the further matter respecting them is more specifically recorded, that, “*God made two great lights, the greater light TO RULE THE DAY, and the lesser light TO*

RULE THE NIGHT."—Now it is important to observe in this *sixteenth* verse, that the term employed in the original is not (BARA), but (ASAH), correctly translated "*made*," which word, both in the original and in its vernacular use, as has before been noticed, properly may be rendered by the term constructed, constituted, formed, or appointed ; and hence only necessarily predicates the like meaning in respect to these "*two great Lights*," viz. that by the Divine volition having been rendered visible, there was now assigned to them a special use or office in the world's new economy. And it may be suggested, in confirmation of this view, that, in the construction of this *sixteenth* verse, the emphasis of the passage may not improperly be thrown, not as is commonly done, on the word *made*, but on the word *rule*, so that the passage might rather be read thus :—And God made these two great lights themselves, the one to *rule* the day, and the other to *rule* the night. And so again in the *seventeenth* verse, the emphasis may not improperly be laid, not on the term "*set them*," but on the term "*to give light* ;" thus throughout with peculiar preciseness of diction carrying out the ostensible object proposed to be recorded in this day's work,—first the bringing into visibility, and then, the new functional appropriation of the "*two great Lights*."

It is unnecessary to pursue the explication of the

succeeding verses of this history of the Creation, since no particulars are narrated in the Divine work executed on the *fifth* and *sixth* days, which, according even to the current interpretation of the Mosai-cal Record, may not fully accord with the fact of the Earth's Antiquity. The calling at that period, into being, as therein revealed, the races of animals now inhabiting the earth, by no means precludes the successive Creations in antecedent time of former races, adapted to the then physical conditions of an ancient Earth; and the recorded first Creation at this Mosaical period, of the altogether new creature MAN, is a fact strongly confirmatory of the archaic Earth's ostensible Records; Nature's archives clearly declaring that no human remains, nor any vestiges of man's footstep or of his works, are to be found before that historic period, ascribed by geological discoveries to the construction of the Earth's present alluvial surface.

Since, therefore, the object proposed in the present investigation is not to take up all the various interesting considerations the Mosaical history may open, but, simply to consider its revelations in reference to the fact of the Earth's Antiquity, the examination of the Sacred Record is here brought to a close; and with what measure of result? It is a pleasing grateful one, such indeed as might beforehand have reasonably been anticipated—that the Revelations of the *Word* of God, when interpreted on their own

legitimate principles, in no way clash with the Revelations of the *Works* of God. No, they sweetly harmonize; the Records of Inspiration, and the Archives of Nature, each uttering the same clear consentaneous Divine voice. Let each particular in the Sacred History be submitted to an enquiry scrutinizing but candid, and unfettered by old prepossessions, and not one point of the Divine Revelation will be found which may not be capable of a fair explication, in consistency with the full admission of an Ancient Earth, including evolutions of long-antecedent physical and animal economies. Trace the course of the Sacred History in some few of its principal features, and this satisfactory result will readily appear. The "Creation" enunciated in the *first* verse, being fairly applicable, from all the terms in which it is described, to an independent antecedent act of Omnipotence, the fact of a prior existence of the Earth becomes at once admissible. The description of the condition of the Earth, revealed in the *second* verse, being in all its terms legitimately applicable, not to a chaotic mingling of the primal elements of things, but to the disorganized state of distinctive terrestrial existences, gives entrance for the revelation here, of that disrupted condition of the terrestrial frame naturally resulting from one of the Earth's ordinary grand catastrophes. The terms in which, in the *first* day's work, the calling forth of the light is described,

by no means necessarily predicating its then primal creation; admission is hence opened for the existence of its prior influences through indefinite ages. The process described concerning the “Waters,” as the *second* day’s work, shewing them to be aqueous vapours, and the bringing the “firmament” into their vacated spaces, in no respect, by the terms used, limiting the expansion of this atmosphere, only, to these localities, or indicating then its first creation;—yields admission for the prior circumambient flow of this necessary constituent of an ancient Earth. The gathering of the overflowing “waters” into their channels on the *third* day, and the consequent making to appear the “dry land,” in no way implying that these two grand constituents of the Globe did not exist in their distinct individuality before, makes full admission for all the ancient terrene and marine evolutions: and the education from the teeming earth, on this third day also, of its vegetable tribes, whose seed was in itself upon the earth, precludes not, but rather opens to view, a prior terrestrial condition, possessing a like vegetable fecundity. And the work of the *fourth* day, in none of the terms in which it is related declaring then a creation of the two great Lights in the firmament of heaven, but only, necessarily, the *letting them be*—their visible display, and the after assigning to them particular economic uses—admission is

hence opened for these Luminaries to have performed their ordinary enlightening and invigorating functions, amidst creations and epochs spread over illimitable time and space. Thus there is nothing in the very phraseology of the Mosaic history itself to contravene, but every thing, on the contrary, to admit, the existence of an **ARCHAIC EARTH**; and, for aught the Sacred Record opposes, the course of Nature may have flowed on through ancient ages, just as it does now in the present age of the world. Thus the requirements of geological investigation will be satisfied, which manifest, that in the archaic economies the same physical processes then went on in the earth, and the same functions of nutrition and organs of sense existed in organic beings, calling, therefore, for the same light, air, and elements of nature, to be in operation then, as now. All this the explication that has here been adduced presents as its legitimate and interesting conclusion.

And how, in the preceding investigation, has this satisfactory result been brought out? Not, let it be observed, by appealing, as might have been done, to the absolute necessities of the case, arising from the clearly-authenticated facts Geology has established, which, by compulsion, might *force out* an accordant interpretation. Such a course of argument has throughout scrupulously been abstained from, and the conclusions educed have, exclusively, been de-

rived from the *literalities* alone of the Sacred Record, read in their primal force by the light of Scriptural analogy. The evidence this has afforded has, by its own native force alone, elicited these concordant results. But bring now into court, and add to these unaided witnesses, the accumulative testimony which the multitude of well-ascertained geological phenomena will supply, and the increased weight of evidence yields then a potency of conviction, that must compel a verdict irrefragable and sure. If the mind hesitating or wavering before in its opinion as to the Earth's Antiquity, might yet, from a review of the literalities of the text, admit that so it *may* be, it will be compelled to admit now, with Nature's weighty testimony added in the scale, that so it *must* be.

It matters not to determine whether Moses was acquainted with the full scope and meaning of all the matters of his Record, when he, so wondrously, under Divine Inspiration, indited this sacred history, as to be thus capable of this harmonious interpretation. The presumption probably may be, that his knowledge of natural facts reached only to "all the learning of the Egyptians," amongst whom no very distinct notions of a true cosmogony can be traced. But, under such circumstances, it certainly does appear a grand and beautifully-convincing argument for the Divine Inspiration of this sublime history, that, supposing the historian himself unacquainted

with the physical facts of the case, they should, nevertheless, have been so reconditely recorded, with such precision of language, as to coincide satisfactorily with a wide range of phenomena, whose existence was not vouchsafed by God to be revealed fully to view, till four thousand years after the history had been written. Could human powers alone "so weigh words and measure wise sentences," that, while they ever subserved the purposes of the present, they should equally suit the requirements of the future, and be to all ages of the world alike *The Oracles of God*? What a standard Miracle is the Holy Scripture! How glorious in the mystery of his wisdom is HE who inspired its expansive revelations!

Still it may be said, that although not ostensibly brought forward to force a favourable conclusion, the preceding interpretation has, nevertheless, really received a bias from a prepossession in favour of a geological coincidence of result. The fact is admitted, and the inclination asserted to be a proper one. It only carries out, indeed, the special principle it has been the object throughout the present investigation to elucidate and maintain—that we are *bound to seek* for harmonies between the revelations of the Almighty, in whatever form, whether in Word or Work they may emanate from His throne. Surely this is no less reverential to God's high attributes,

than it is an exercise grateful and satisfactory to ourselves. How truthful! how delightful too! ever to view Nature as a sacred temple, whose portals are always open for Inspiration to enter, and set up there her altars, confident that the oracular voices she shall hear therein will surely be in unison with her own celestial songs. It can be no wrong bias then, where the hand of the God of Unity is seen, there to seek for unity—there, in action and in purpose, unity must be—and if we find it not, we may be assured that our search has been, in some respects, either imperfect or perverse.

Satisfactory it may be, however, to see that these now-advanced Scriptural interpretations—which by no possibility could receive their full elucidation till God, by opening wider the book of Nature, was pleased to make a fuller discovery of his ways—have, nevertheless, in some indistinct degrees, been entertained, in all ages, by various Biblical Critics. All such ancient explications are doubly valuable, being derived, of course, simply from a consideration of the terms themselves of the Divine Record, traced to their roots, and viewed in their analogies. Many among the Jewish Expositors,—the Christian Fathers,—the early Schoolmen,—and our own early Biblical Commentators,—all writing before the period of Geological Science—afford us glimpses of an opinion,—some more, and others less strongly ex-

pressed,—that the first verse of Genesis is not a summary account of the subsequently-recorded six days' work, but declares a primal creation of materials, out of which this present visible world was constructed. This is all that could be expected from these early Writers, under the circumstances of the case, and the imperfect knowledge of natural things in their day existing. And it is all, moreover, that is absolutely essential to the geological argument, since a pre-creation of the heaven and earth, and a subsequent construction thereof at the time of the human creation, where the interval between these two acts is confessedly undefined, gives adequate scope for all those vast periods of evolution, and successive creations, which geological investigation discloses.

A few of these embryo-geological opinions, as they may be called, will be cited in an Appendix, as offering a valuable and unexpected confirmation, from the olden time, of the Modern Scriptural Interpretation; and this review of some concurrent opinions of more Ancient Authors, expressed before the revelation of Geological Science, will be followed by a few extracts from some more Modern Writers, whose standing, both in Theology and Science, may properly claim attention to their views. There has purposely from this list been excluded many valuable extracts from Works exclusively devoted to Geological subjects, as their Authors might be supposed

to be professionally biassed in favour of its high deductions. But it is, nevertheless, important to notice, that all those many men of superior intellect, character, and enterprize, who have given the attention of their lives to geological research, are, without exception, unanimous in their conviction of the Earth's vast Antiquity, and have expressed that opinion constantly and forcibly. And *who than they* can be better able to give a trustful opinion? It would seem as unreasonable to view with suspicion the opinion of a Physician regarding a medical subject, or of a Divine respecting theology, as, on the ground of professional bias, to invalidate that of the professional Geologist. Who so likely to know best as those who have investigated most? The opinions of those eminent persons may, however, be readily referred to in their Geological Works. Those that will be extracted are selected out of Miscellaneous Works, not immediately relating to Geology, and may be considered, therefore, as scattered rays, collected into a point here, to shed their united light on this investigation.

Thus, from these various extracts, now to be adduced out of a numerous coinciding band of Christian sages, of ancient and modern times, it will be seen that the explication of the Earth's vast Antiquity, in accordance with the revelations in the Mosaical Record, is no crude or unsupported theory.

Minds of the largest intellectual capacity and high moral power, have given their testimony more or less strongly in favour of this harmonious concordance, and many of them have regarded the fact as a matter full of high and holy influences. Sure we may be indeed, that any such astonishing extension of our view of the Almighty's workmanship into wondrous scenes before unfolded, and into unconceived time before untold, cannot be without its lofty practical results. The grand discoveries of Nature are ever to be read as grand lessons of piety; and as we turn over page after page in this magnificent volume, many awakening voices should reach our hearts from the truths of the past they tell, and the prophetic visions they unfold of the future. Our succeeding Chapter will therefore be employed in tracing out some of those moral lessons the fact of the Earth's antiquity may be understood as uttering to us.

A P P E N D I X

TO

CHAPTER III.

IN this Appendix to the Third Chapter, some opinions of ancient authors in reference to subjects in connexion with the Creation will first be cited.

The expositions of Scripture afforded by various Jewish Writers, though mingled with many monstrous conceits, yet, when their attention is directed to philological matters, are exceedingly valuable; as likely to exhibit the primal force of the original language, with more perspicuity than other interpreters. Eben Ezra as quoted in Willet's *Hexapla in Gen.* 1632:—

“This clause ‘*In the beginning*’ is used here syntacticè, in construction with the next word, as though this should be the sense, ‘In the beginning of creating, or when God created,’ and so the sense should be suspended till the second or third verse.”

The Rabbi David Kimchi. Fagius, in his Annotations in *Critici Sacri on Genesis* i. thus alludes to his opinions concerning the term “in the beginning.”

“The Jewish Interpreters vary in their exposition of this term, but the opinion of Rabbi D. Kimchi seems preferable to me to any other; for in his ‘Book

of Roots' he explains it in this manner. That God created the heavens and the earth, and *then* those things that were produced out of them. After which, Moses goes on to say, that in the beginning of the creation the Earth was without form, and void.—Thus far, he ; from which you see, that in the opinion of Kimchi, a certain order of created things, (which some are unwilling to admit) is here indicated by Moses ; viz. that God first created the heavens and the earth, and afterwards, those things which were formed out of them, as if from pre-existent matter : what the appearance and condition of the earth was, is intimated by Moses in the second verse, where he says, 'the earth was without form, and void.'"

Many of the Christian Fathers held a similar opinion.

Basil, *Homil. I. in Hexahemeron, Op. Tom. I. p. 7.*

"In the beginning God created the heavens and the earth."—"By these two extremes Moses signified the *substance* of all things, attributing to the heaven the eldership of creation ; but asserting that the earth was of subsequent origin. But if there were any thing between these that was made together with them, although Moses says nothing respecting the other substances—such as fire, water, and air,—yet you may understand that all these and other things were mixed up as it were in the *substance*, so that you will find them elicited from the earth."

Again, *Homil. I. Tom. I. p. 7.*

"It is probable that something existed before this world, which we may conceive of in our minds, but of which no narrative is supplied."

Augustine, Lib. I. *in Gen. cont. Manich.* c. 7.

“So that this heaven and this earth, first made, was no other than the world; though not yet set in perfect order.”

Chrysostom, *Paraphrase.*

“It is clear that God, from things not in being, made those that are in being; from those not visible, the things which do appear; and from things having no subsistence, those things which subsist.”

Dr. Wiseman's *Lectures on the Connexion between Science and Revealed Religion*, Vol. i. p. 297.

“It is important and interesting to observe how the early Fathers of the Christian Church should seem to have entertained precisely similar views; for St. Gregory Nazianzen, after St. Justin Martyr, supposes an *indefinite period* between the creation and the first ordering of all things. St. Basil, St. Cæsarius, and Origen, are much more explicit.”

Dr. Pusey's Note in Dr. Buckland's *Bridgewater Treatise* Vol. i. p. 23.

“Many of the Fathers (they are quoted by Petavius, l. c. c. xi. § 1—8,) supposed the first two verses of Genesis to contain an account of a distinct and prior act of creation; some as Augustine, Theodoret, and others, that of the creation of matter.”

From our own early Biblical Expositors may be quoted

Dr. Meyer, *Commentary on the Old Testament*. 1653.

“*In the beginning.*”—“I assent rather to others who take this according to the letter, as if it had been

said, When the world first began, God proceeded to the making of all things after this manner,—first, He created, that is, [made of nothing,—the heaven and the earth, that is, He laid a foundation of all his works which He would make, by rearing up a high heap of matter, out of which they should be formed.”

Dr. Andrew Willet, *Hexapla in Gen.* 1632.

“This heaven and earth, then, here mentioned to be created in the beginning, are the same heaven and earth which are now, comprehending the general matter and seed whereout all other things in heaven and earth were made: first created in the matter, afterwards perfected in form, and lastly beautified in their ornaments. This, then, was the order of the Creation first, the same heaven and earth were created in a confused substance and unformed matter, then the form was added.”

Poole's *Synopsis*, (*in loco*). 1669.

“*In the beginning.*”—“The sacred writer proposes at the outset the whole matter—that the Author of the World might be known, and that it did not exist from eternity, as philosophers thought; and, moreover, that God created all things from nothing.”—“The term *in the beginning* may refer either to order, or to time. In the beginning God created the heavens and the earth, and, afterwards, those things that were produced from them.”—“The term *created* is to be taken in a twofold sense; first, to create from nothing, as in the first verse; secondly, to produce anything excellent out of materials already forthcoming, as in the following verses: he created

whales and man and so-forth.”—“The term *the heavens and the earth* means the matter of the heavens and the earth. God created the heavens and the earth from nothing; then made other things from these, as materials already existing.”—“Wherefore is God said in the seventh verse to have *made* what was made before? Answer: he made, *secundum quid*, that is, he fitted (*aptavit*), he made by giving to it accidental quality, not substantial form.”

Stackhouse, *Body of Divinity*, p. 180. 1752.

“’Tis a great dispute both among astronomers and divines, whether the history of this creation, as it is delivered by Moses, includes the highest heavens, or is only intended to describe the formation of the earth, and its dependencies. Those who take his words, ‘*In the beginning God created the heaven and the earth*’ for a summary proposition, are of opinion, that the entire universe is comprised in the six days’ work; but others, who think them a general preface to his history, imagine that they extend no further than to this habitable world; at the most, no further than this planetary system. They suppose, then, that the creation of the heavens was precedacious to that of the earth; some think to that of the *chaos*, that they were made for the reception of angels, who were created many ages before the formation of man, and that it is agreeable to the notions we have of God, that He should have creatures to communicate His goodness to, and a place to display His glory in, long before the Mosaic account of time. Though we should allow heaven in this place to be taken in its most exalted sense, yet all that can be inferred hence is,

that Moses is here instructing the Jews, not only that the little globe whose formation he was going to describe, but even the frame of universal nature, and the heavens with all their parts, both visible and invisible, were effected by the same Almighty hand. But at what point of time they were effected, he nowhere determines. Only he intimates in the very next words, that they were of an ancients standing than the earth. Such as confine the Mosaic creation to this sublunary world only, have this interpretation, that the heavens and heavenly bodies were not *created* on the fourth day, (for that they were long before) but were only then brought to sight, and made apparent to the earth, after the superior region of the chaos which obscured them before, was so far defecated, and made clear, as to admit of the rays of the Sun. Though therefore the substance of the Sun, Moon, and Stars, were certainly before, yet they are said, not improperly, then to be made, when, the darkness of the indeterminate air being dissipated, they became conspicuous to the earth, and began first to serve it in the capacity of the Sun, Moon, and Stars."

Milton, *Treatise on Christian Doctrine*, translated by Bp. of Winchester.

"Thus far it has appeared that God the Father is the primary and efficient Cause of all things. With regard to the original matter of the universe, however, there has been much difference of opinion. Most of the moderns contend that it was formed from nothing, a basis as unsubstantial as that of their own theory. In the first place, it is certain that neither the Hebrew verb (BARA), nor the Greek *κτίζειν*, nor the Latin

creare, can signify to create out of nothing. On the contrary, these words uniformly signify to create out of matter, Gen. i. 21, 27, '*God created...every living creature...which the waters brought forth abundantly...male and female created he them.*' Isaiah liv. 16, '*Behold, I have created the smith...I have created the waster to destroy.*' To allege, therefore, that creation signifies production out of nothing, is, as logicians say, to lay down premises without a proof; for the passages of Scripture commonly quoted for this purpose, are so far from confirming the received opinion, that they really imply the contrary; namely, that all things were not made out of nothing. What we are required '*to understand through faith*' respecting '*the worlds,*' is merely this, that '*the things which are seen were not made of things which do appear,*' Heb. xi. 3. Now *the things which do not appear* are not to be considered as synonymous with nothing (for nothing does not admit of a plural, nor can a thing be made and compacted together out of nothing, as out of a number of things); but the meaning is, that they do not appear as they now are. The Apocryphal writers, whose authority may be considered as next to that of the Scriptures, speak to the same effect. Wisdom xi. 17, '*Thy Almighty hand hath made the world of matter without form.*' 2 Macc. vii. 28, '*God made the earth and all that is therein of things that were not.*'

"Since, therefore, both reason and Scripture concur in pronouncing that all these things were made out of matter, it necessarily follows that matter must either have existed independently of God, or have originated from God, at some particular point of time. Scripture solves the question, that all things were of

God. Rom. xi. 36, '*for of Him, and through Him, and to Him, are all things.*'

One first matter all
Endued with various forms, various degrees
Of substance, and in things that live, of life.

Paradise Lost, v. 472.

Bishop Patrick, *Commentary*, 1727.

"*The heavens and the earth.*"—"The Hebrew particle, '*Eth*,' put before both heaven and earth, signifies as much as '*with*,' if Maimonides understood it aright; and makes the sense to be this: He created the heavens with all things in the heavens, and the earth with all things in the earth. Certain it is, that these two words *heaven* and *earth* comprehend the whole visible world, 'God first made the fixed stars, and all beyond them, (so I take the word heaven here to signify,) for they had a beginning as well as this lower world, though they do not seem to be comprehended in the six days' work.' And thus Philo understood the first word '*in the beginning*,' to respect the order in which things were created. God began His creation with the *heavens*, as the most noble body, and then proceeded to the earth, an account of which follows—'*without form, and void*;' that is, at first, He only created a rude matter of those things, which afterwards were fashioned as we now see them."

Now the above extracts are the expositions of Biblical Critics, writing before the discoveries of modern Geology had opened to view the fact of the Earth's Antiquity; and hence, as independent testimonies, they are of considerable weight. They not

only furnish the unbiassed views of the writers themselves, on the passages in question ; but also they evidence the floating opinions of Divines, in the age when these writings severally appeared, grounded simply on a philosophical examination of the original text.

This review of concurrent opinions of more ancient date may now be concluded by a few extracts from more modern Authors—whose names both in the departments of Theology and Science must command attention to their views.

Archbishop Bird Sumner, *Records of Creation*. 1814.

“According to the Mosaic history we are bound to admit, that only one general destruction or revolution of the globe has taken place since the period of that Creation which Moses records, and of which Adam and Eve were the first inhabitants. The certainty of one event of that kind would appear from the discoveries of Geologers, even if it were not declared by the Sacred historian. But we are not called upon to deny the possible existence of previous worlds, from the wreck of which our globe was organized, and the ruins of which are now furnishing matter for our curiosity. The belief of their existence is indeed consistent with rational probability, and somewhat confirmed by the discoveries of astronomy as to the plurality of worlds.”

Rev. Professor Sedgwick, *Discourse on Studies of Cambridge*.

“We see from the form and structure of the solid masses on the surface of the earth, that many parts of

it have been elaborated during successive periods of time, and if we cannot point out the first traces of organic life, we can find at least, an indication of the beginning. During the evolution of countless succeeding ages, mechanical and chemical laws seem to have undergone no change; but tribes of sentient beings were created, and lived their time upon the earth. At succeeding epochs, new tribes of beings were called into existence, not merely as the progeny of those who had appeared before them, but as new and living proofs of creative interference; and though formed on the same plan, and bearing the same marks of wise contrivance, oftentimes as unlike those creatures which preceded them, as if they had been matured in a different portion of the universe, and cast upon the earth by the collision of another planet.—At length within a few thousand years of the days in which we live, a period short indeed, if measured by the physical monuments of the past, Man and his fellow beings are placed upon the earth. The Bible instructs us that man and other living things have been placed but a few years upon the earth; and the physical monuments of the world bear witness of the same truth. If the Astronomer tells us of myriads of worlds not spoken of in the Sacred Records, the Geologist in like manner proves (not by arguments from analogy, but by uncontrovertible evidence of physical phenomena) that there were former conditions of our planet, separated from each other by vast intervals of time, during which, Man, and the other creatures of his own date, had not been called into being. Periods such as these belong not therefore to the moral history of our race, and come neither within the letter nor the spirit of Revelation. Between the first creation of the earth and that day in

which it pleased God to place Man upon it, who shall define the interval? On this question Scripture is silent; but that silence destroys not the meaning of those physical monuments of His power that God has put before our eyes; giving us at the same time faculties whereby we may interpret them, and comprehend their meaning. If the Bible be a rule of life and faith, a record of our moral destinies, it is not, I repeat, nor does it pretend to be, a revelation of natural science."

Sharon Turner, *Sacred History of the World*.

"The Sacred Historian gives the largest latitude for the investigations and deductions of geological science."—"What interval occurred between the first creation of the material substance of our globe, and the mandate for light to descend upon it, whether months, years, or ages, is not in the slightest degree noticed. Geology may shorten or extend its duration, as it may find proper. There is no restriction on this part of the subject. In this portion of time or eternity, we may place the formation of our elementary matter; the composition and arrangement of the vast central and interior contents, whatever they may be; and the construction, circumambieney, and consolidation of all the primordial rocks."

Rev. William Conybeare, Letter in *Christian Observer*. 1834.

"I regard Genesis i. 1, as an universal proposition, intended to contradict all the heathen systems which supposed the eternity of matter, or polytheism, or any notion inconsistent with the infinite perfections of the one great Creator; and verse 2, I regard as proceeding to take up our planet in a state of ruin

from a former condition, and describing a succession of phenomena, effected in part by the laws of Nature, (which are no more than our expressions of God's observed method of working), and in part by the immediate exercise of Divine power in directing and creating.

“Not the mere theoretical views of geologists alone, but the conclusions which appear by the most cogent logical necessity to result from the phenomena of the structure of the earth's surface, and the variety and order of the very numerous successive series of organic remains embedded in the strata, do undoubtedly appear to require periods of very considerable duration ; and to indicate that very many ages had elapsed before ‘the diapason closing full in man,’ a new exertion of the Creative Energy made in its own image a being of higher intellectual and moral capacities as the head of its other terrestrial works. Now the evidence of Geological phenomena most satisfactorily agrees with the Scriptural Record in assigning to this last great event a very recent epoch ; and it is surely very valuable as an independent testimony to this important fact, which clearly involves the necessary admission of an interference with the previous order of nature, by a new and direct exertion of creative power, and therefore strikes at once at the root of every sceptical argument against Miracles. Now it is surely nowise inconsistent with the fullest reception of Revelation to maintain that it professedly confines itself to the exposition of the dispensations of the great Creator as they concern his final intellectual creation ; that, in a word, the Bible is exclusively the history of the dealings of God towards man.”

Dr. Chalmers, *Evidences of the Christian Revelation*. 1817.

“Does Moses ever say, that when God created the heavens and the earth He did more, at the time alluded to, than transform them out of previously existing materials? or does he ever say that there was not an interval of many ages between the first act of creation, described in the first verse of the book of Genesis, and said to have been performed ‘*in the beginning*,’ and those more detailed operations, the account of which commences at the second verse, and which are described to us as having been performed in so many days? or finally, does he ever make us to understand that the genealogies of man ever went any further than to fix the antiquity of the species; and, of consequence, that they left the antiquity of the globe a free subject for the speculation of philosophers?”

Dr. Chalmers, *Natural Theology*.

“The strength of the argument on the side of religion, is often weakened by a jealousy, or studied disunion of the truth of one department, from the truth in another; but believing as we do, that instead of a conflict there is a corroborative harmony between them, we shall advert once more to the Mosaic account of the Creation; and more especially as the reconciliation of this history with the indefinite antiquity of the globe, seems not impossible; and that, without the infliction of any violence on any of the literalities of the Record.

“We have already endeavoured to shew how, without any invasion even on the literalities of the Mosaic Record, the indefinite antiquity of the globe

might safely be given up to naturalists, as an arena, whether for their sportive fancy, or their interminable gladiatorship. On this supposition, the details of that operation narrated by Moses, which lasted for six days on the earth's surface, will be regarded as the steps by which the present economy of terrestrial things was raised about 6000 years ago, on the basis of an earth then without form, and void: while for aught of information we have in the Bible, the earth itself may before this time have been the theatre of many lengthened processes, the dwelling-place of older economies that have now gone by, but whereof the vestiges subsist even to the present day, both to the needless alarm of those who befriend Christianity, and to the unwarrantable triumph of those who have assailed it."

Rev. H. Melvill, *Sermon on Gen. i. 2.*

"We would adopt the statement, which has been increasingly adopted and supported by our divines, that the first two verses of the book of Genesis have no immediate connexion with those that follow. They describe the first creation of matter; but, so far as anything to the contrary is stated, a million of ages may have elapsed between this first creation and God's saying, 'Let there be light,' and proceeding to mould matter into a dwelling-place for man. You cannot shew that the third verse is necessarily consecutive on the two first; so that what is recorded in the one may not be separated by a long interval from what is recorded in the others. On the contrary, it is clear that the interval may be wholly indefinite, quite as long as Geology can possibly ask for all those mighty transformations, those ponderous successions, of which it affirms that it can produce indubitable evidence. And

we cannot but observe the extreme accuracy of the Scriptural language. It seems to be nowhere said that in six days God created the heavens and the earth; but, as in the fourth Commandment, that, 'in six days the Lord made heaven and earth.' Creation was the act of bringing out of nothing the matter of which all things are constructed; and this was done before the six days; afterwards, and during the six days, God made the heaven and the earth; He moulded, that is, and formed into different bodies, the matter which He had long ago created. And it is no objection to this, that God is said to have created man on the sixth day; for you afterwards read that 'God created man of the dust of the ground;' so that it was of pre-existent matter that Adam was composed. We seem, therefore, warranted in saying, that with the third verse of the first chapter of Genesis commences the account of the production of the present order and system of things; and that to this Moses confines himself, describing the earth as made ready for man, without stopping to speak of its previous conditions. But since he does not associate the first creation of matter with this preparation of the globe for its rational inhabitants, he in no degree opposes the supposition, that the globe itself existed immeasurably before man; that it underwent a long series of revolutions; was tenanted by animals, and clothed with vegetation."

"These then are the general views which we think furnished by, or, at least, consistent with our text (Gen. i. 2) and the preceding verse. We take these verses as the only record which God hath been pleased to give of a mysterious, and probably immense,

period, whose archives are found, by the scientific eye, sculptured on the rocks, or buried in the caves of the earth. They refer to ages, in comparison perhaps of which the human chronology is but a span, and of which, though we have received no written history, we can read the transactions in the fuel which we heap on our fires, and in the bones which we dig from our hills. And there appears to us something surpassingly sublime in the thought, that our text may be thus the general description of an indefinite interval, from the creation of matter to the production of man. We do not know a grander contemplation than that to which the mind is summoned, when required to consider this globe as of an antiquity which almost baffles calculation, and as having been prepared, by changes which may have each occupied a series of ages, for the residence of beings created in the image of God."

CHAPTER IV.

MORAL USES TO BE DERIVED FROM THE FACT
OF THE EARTH'S ANTIQUITY.

"If led from earthly things to things divine,
 His creatures thwart not His august design,
 Then praise is heard instead of reasoning pride,
 And captious cavil and complaint subside.
 Nature employed in her allotted place
 Is handmaid to the purposes of grace :
 By good vouchsafed makes known superior good,
 And bliss not seen, by blessings understood."

THE "Temple of Nature" is a term expressing no mere fabulous figure. Nature's wide domain is, in very deed, an ample noble Shrine, where in many a sacred place the Deity is specially manifested, and there many a grateful altar may be set up for a worship, pure and exalting; and the more widely her gates may be thrown open, and we freely may enter there, and become familiarized with the revelations her Oracles may unfold, the better shall we know, and shall adore HIM, who, All-pervading and Supreme, dwelleth in this his own-assigned place, "not made with hands." Vain must be the fear, indeed, that religion will ever really suffer from the advancing discoveries of Natural Science! Vain to suppose that the more ardent lovers and students of

the mysteries of the natural world will hence have their regards weakened for heavenly mysteries! It ought to be, and in very many well-known instances it is, directly the reverse: some of the noblest disciples of science have been the lowliest adorers of the Almighty Being, whom they have seen as the First Cause, and the grand efficient Governor and Preserver of all Nature's operations. Certain it is, that did we ever stop and draw out to view, in any due degree, those marked attributes of a Divinity which are written, as with a sun-beam, on all the circling range of the material works around us, then could they not be glanced over with that careless, uninformative, unadoring gaze, that too often is their niggard meed of tribute. The loftiest, far-searching intelligences will always prove the humblest, truest adorers. What indeed may we conceive to be one chief cause of the noble adoration the holy Angels pay, but the wider, deeper, loftier view, their unclouded eye can take over God's universe—penetrating all space,—sweeping through all time! The infinitude of the Creator's skill and goodness everywhere, and whenever done, flows in upon their senses with an overwhelming influence of deep-felt, adoring worship, altogether irresistible and sublime!

“Nature throwing aside
Her veil opaque, discloses with a smile
The Author of her beauties, who, retired
Behind his own Creation, works unseen.”

And thus would it ever be with ourselves: as our acquaintance with the natural world may become more intimate by the veil that shrouds her mysteries being more extensively withdrawn, the readier will those who, in Milton's phrase, "seek to know the works of God, thereby to glorify the great WORK-MASTER," advance step by step to a juster view and adoration of His glorious character, till, no longer seeing through a glass darkly, they will, in a clearer, better world, "behold the glory of the Lord face to face."

What indeed could be a greater impeachment of religion than to suppose that this would not be so? Can that be Truth which shuns the light of truth? And what are Nature's phenomena but *acted truths*? acted, it will be confessed by all but an Atheistic spirit, by the very God himself! What indeed is the Almighty if we sever Him from his material Works, regarding Him solely as an Abstract Essence, exercising Himself, alone, in spiritual influences, within the range only of the kingdom of grace? No doubt it is in the dispensations of redeeming mercy that God's love and power are most conspicuously displayed; but the Wonders of Creation might always, with congenial influence, be brought usefully to stand side by side with the Wonders of Redemption; and it is the too-often virtual severance of the two, and hence the abstraction from human regard of religious influences in connexion

with the natural operations of the world,—and thus from the commonalties of man's daily life, that is one great cause of the too general extrinsic position religion holds in respect to the masses of society. The Almighty's hand being unexhibited in dominant action with material things, the sense of a Divine Providence, and a consequent feeling of God being everywhere, and acting throughout all matters, thence fails to gain an entrance into man's practical creed; and this grand truth, so rich a consoler in his trials, so sure a guide in his perplexities, is thus lost to his faltering footsteps. The great Scripture Moralist teaches us a very different theology: he instructs us that God's Works are the appointed Volume to unfold to us God's attributes; that the one is to reflect to us the other:—“*For the invisible things of Him from the foundation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead.*” And if, by the Word of Inspiration itself, we thus are instructed to search into visible Nature, to gain any right conception of the invisible Supreme, there can be no boundary to such a search; even angelic intelligences can never grasp with anything like approachable semblance the entire fulness of the Divine Majesty, but the deeper we do penetrate into the knowledge of His works, our conception of the “Great Workmaster” will become larger, brighter, and more prac-

tical, and the enjoyment of its high influence more powerful and more sure.

Natural Science may then, unhesitatingly, pursue her noble course of developments, and Religion may fearlessly hail the advancing march of her high Revelations,—satisfied that each will mutually reflect light and glory on each other,—in the end conducing to the due adoration of their common Author.

“Philosophy baptized
In the pure fountain of Eternal Love,
Has eyes indeed, and viewing all she sees
As meant to indicate a God to man,
Gives Him the praise, and forfeits not her own.”

Such then being the justly-anticipated result of all duly-conducted researches into Nature's works, can we doubt that much of elevating influence, and many a lesson of practical wisdom, may be drawn from contemplations connected with that department of her domain Geology has laid open to view, in the by-gone wonders of an Archaic Earth. So pregnant in deductions of rich import are, indeed, the marvels of power and skill the pre-Adamite constitution of the Globe has revealed, and so relevant to the condition, hopes, and interests, of the now-existing generations are many of its antique phenomena, that, considering the interwoven chain, which would seem to link the past, present, and future of all God's workmanship into one vast, combined design, we may readily believe that the actings of His hand, in the far distance

of Ancient Economies, cannot be without their influences of moral good upon the people of our own times. A proper conclusion, therefore, to this present investigation may not unsuitably be, to trace out some of the Moral Uses derivable from the manifested fact of the Earth's Antiquity.

1. *The revelation of the Earth's Antiquity affords a striking confirmation of the plenary inspiration of the Holy Scriptures.*

However high the origin, or sublime the Revelations of any Scriptural Record, yet, after it has existed and been viewed in its bare historic features, for a long course of time, the source whence the Word originally issued is apt to be overlooked, and it comes to be regarded under a commonness of character altogether deficient and untrue. The Peasant of the South, day after day sees the flowing Rhone rolling on before him in its deep rich course: water is water—and he thinks no more of the noble stream, or of the cloud-capped mountains whence are its exalted fountain-springs, that if it were a mere common mass of waters. And so to very many—history is history—and untraced are the august characteristics, and the high-throned sources which mark the vast superiority of some historic streams over others; hence even the heaven-derived Records require at times a due regard to be awakened to them by mani-

festations which may betray, in their long-indited words, an origin more than human, and lead us to the recognition that "*the Lord was in the still small voice.*"

It would seem probable therefore, that this is one reason why the revelations of God's Word, and the various disclosures of His Works, have not been made to man all at the same period of time. The grand support of Religion in the world will ever be found in the maintenance, in its full integrity, of the Divine Inspiration of Scripture ; take that conviction away, and the guiding cheering presence of the Deity in familiar intercourse with his creatures is lost ; human pride and ignorance have however, in every age, attempted to make inroads on this GRAND TRUTH. We may expect, therefore, that there will be provided by God, ever and anon, circumstances to refreshen and maintain it. Now nothing would appear more fitted to promote this object than bringing out to view at recurring periods, new and striking harmonies between Nature and Scripture ; the voice of the Creator of the world is thus manifested therein, such harmonies bearing eloquent witness that the same Almighty Being who confessedly is the alone Author of the Natural Phenomena, must also have been the Inspirer of those anciently-recorded Words wherein the newly-developed natural truth in latent, but literal characters, had been so precisely laid up.

An Archaic Earth, then, harmoniously blending its long-hidden realities with the long-ago indited Record of the Creation, stamps this historic page of Moses with the impress of Divine Inspiration, in a manner most satisfactory, and at this period of the World much needed.

In the various ages when the Holy Scriptures were at first promulged, their respective revelations came forth with marked and awful attestations of their origin, which claimed to them at once an authority as Oracles from heaven. The realm of Nature was seen to be obedient to the self-same voice that delivered the heavenly messages, and Moses, and the long line of Prophets, and the holy Apostles, by the miracles they wrought, commanded an unquestioned recognition of God's voice in every word they inscribed upon their sacred pages. These outward insignia of Divine majesty and might no longer now accompany the written Word—the burning bush—the supernatural plagues—the rained-down manna—the cloudy pillar—the trumpet voices—the hand coming forth from the obscure :—all these chariots of fire, as it were, which brought down the messages from heaven to man, are now withdrawn from view, and oftentimes, alas ! escape our recollection too. The heaven-commissioned Word lies before us, unobtrusive in its own little volume, shorn, to our outward senses, of its primal palpable manifestations as an Oracle from

on High, and hence is frequently, with the commonness of a mere naked historic writing, taken up and canvassed, and made to submit to the dogmatism of man's vain reasonings, or to the measurements of his intelligence, albeit however so imperfect or unsound. How unworthy the sacredness of a Divine Revelation is this irreverent treatment! Every word these living Oracles utter is the offspring of the Divine Mind, the perfection of heavenly wisdom, revealing the truths which once dwelt undivulged in the bosom of God, and in coming forth to take their place among things revealed, the heavens and the earth, and nature through all her chambers, gave it reverent welcome. The want of this accompanying circumstantial pomp and preparation for the due reception of the Divine Word, must now be supplied from our own minds, and from the concurrence of such eventful disclosures as may recall the conviction of its sacred origin. And oftentimes such awakening voices, compelling the heedless mind to a submissive faith in the Inspiration of the Scriptural Records, have been heard, when to the very letter some hitherto unintelligible prediction has received a remarkable fulfilment; its ambiguous, and by some esteemed rhapsodical, valueless words, being at once seen to be full of meaning, and fraught every one of them with a precise importance. The World's history affords many such striking examples of the exact harmony

between the long-before written Record, and the after accomplishment of its revelations, witnessing that not one *jot* or *tittle* of God's Word can ever fail. And if this be so concerning the Scriptural declarations of hidden things *that were to come*, is it less to be expected in respect to the declarations of that same Scripture concerning the hidden things *that are past*? Both are in a certain sense *prophetic Revelations*. The parties who recorded the events that anteriorly had been accomplished, or those events that in the future were to be done, knew nothing either of the one or of the other, of their own knowledge. When therefore a long-ago recorded Scripture history of bygone natural operations, may receive a satisfactory elucidation from some recent developments that advancing science may make of God's Works, the Word of God obtains the same kind of glowing testimony to its plenary Inspiration, by such true voices being uttered therefrom concerning the before unknown *past*, as its prophecies have ever been admitted to yield, by the true voices evidenced therefrom in the accordant fulfilments of the *future*.

What conviction may not, then, the mind now receive from the harmonies of truth discoverable in the contemplation of the Earth's Antiquity coincident with the Mosaic Record of the Creation. That Record, however reverently, aforetime, by the pious mind received, yet was it clouded with many diffi-

culties, which induced some well-meaning persons to separate this and other historic parts of the Bible from the moral and spiritual portions, ascribing to the latter a very different kind and degree of Inspiration from the former; while others have gone still further, and have rejected from the historic narratives all Inspiration whatever; thus leading the way for the more daring rationalist, who would repudiate altogether these Sacred Records as histories, reducing them to mere poetical myths or moral apologues. Would that the palpable attestations originally given to God's Word, or that the renewed stamp of Inspiration at recurring periods impressed upon its sacred text in its unfoldings of the future and of the past, were more faithfully remembered! Then its Holy Records, whether they might be fully understood or not, or whether measuring or not exactly with our varying quantum of knowledge, would be in all cases and in all their parts reverently received, and the patience of faith would be sure to reap its due reward. The latent treasures of wisdom laid up in the written Word would ever increasingly be elicited as the Majesty of God's Works in their advancing development might be brought more and more to shine upon it, and every fresh discovery in Nature's book would invest the written Book with an interest and divinity of character unfelt before. Some special interest has at

times been awakened to a particular piece of land: the husbandman had tilled it for many an age as a mere common field, reaping the ordinary promised fruit of patient industry, but unexpectedly there is turned up from the oft-ploughed soil many ancient coins, bearing inscriptions of long-passed date; the place at once is viewed under a different character, it becomes associated with new and interesting things, and the footsteps of a people are traced there unthought of before. And so it oftentimes is with certain portions of the Divine Revelation. Look at the Record of the Creation—it has remained under our hands for many many centuries with the commonness of regard too generally accorded to the historical portions of Scripture. Every one, nevertheless, who has reverently used this field of the Word, has reaped therefrom that harvest of good which the diligent cultivation of the Sacred Text under all phases of its manifestations will yield; but see when some eventful incident has elicited from its oft-pored-over pages, long, latent, bright, unexpected things—"words that glow and thoughts that burn;" a new interest is then imparted to the place, newly-deciphered inscriptions associate it with Nature's operations long passed away, and manifest that the hand of that August Being who worked out Nature's wonders had been there.

Thus valuable for this grand moral use is the fact of the Earth's Antiquity, revealing as it does the Deity inscribed on his Word. And how refreshing to the mind are such discoveries! Dissatisfactions oftentimes fill the soul, when without a guide she goes to seek God in his natural universe, groping about and unrested, hungering for larger insight, perplexed with difficulties and finding no end, in wandering mazes lost. How refreshing to such a spirit, when the dark cloud God has retired within bursts, and in visible glory He reveals himself to his benighted children, speaking to them in an intelligible voice, and revealing the mysteries of his nature. Then comes rest, and with rest refreshment, and enlargement of soul. For this high satisfaction, derivable from any newly-traced harmony between Nature and Scripture, is not confined to that particular Record which then may receive a brightened elucidation; the confidence of faith thereby established, claims to be carried out and applied to all other Scriptural records of natural and historic facts, although any of these may still in our present stage of knowledge be inexplicable, and some cloud of difficulties may envelope them. It is from the same storehouse of infallible Wisdom they all have come forth whence the Record of Creation issued. Let them bide their time as that has, and the "Ancient of Days" will equally, in due season,

vindicate the reality of every one of his revelations. Yes! the clouds will burst, the shadows will pass away, and He will manifest that all he delivered to be written "as holy, just, and true;" that, indeed, through whatever ordeal, however searching they may pass, "THE WORDS OF THE LORD ARE PURE WORDS, AS SILVER TRIED IN THE FIRE PURIFIED SEVEN TIMES."

2. *The revelations of an Ancient Earth may serve to bring home to our sluggish senses that freshened and marked conviction of an Almighty hand ever in active operation in the world, so altogether needed in these our days, to render the mind duly sensitive to God's all-pervading Omnipotency.*

If it be asked, whence the special need arises, now in the present times, for a superadded testimony to the Creator's dominant power, drawn from the far-receding epochs of the Earth's antique history, when views of his Omnipotency, limited to the more circumscribed era of the human economy, sufficed for the support of our Forefathers' faith? It may be answered, that each succeeding age of the world would seem to require some special matter of awakening interest vividly to recall the dulled and sluggish attention of the people of its day to an Omnipresent Deity. Hence a fresh and lively impress of the Divinity is ever and anon stamped as it were,

in arresting characters, upon some hitherto-unexplored sphere of Nature's operations, that thus, with a renovated distinctness, the footsteps of the Almighty in the universe might be palpably seen and felt. The wonders of an Ancient Earth would seem to supply this special material Oracle to enunciate these freshened revealings of the Divinity to the now-existing generation of men. "Surely the Lord is in this place!" can hardly fail to be the irresistible exclamation of any one who may duly contemplate the Almightyness of power, and miraculous Skilfulness of design, evinced in the disclosed economies of an Archaic Earth; its mighty evolutions, its long-elaborated, but harmoniously-combined phenomena, its multitudinous series of beautiful sentient creations, all display this Globe on which we live to have been the theatre of a Divine Omnipotency, with a glowing conviction fitted to reach the heart of the hardest and most heedless.

And is such a special, potent conviction of the ruling hand of God in the earth uncalled for by the circumstances of the times in which we live? Far from it. The moral exigencies of society now forcibly evince its need. We too well know that as the course of the world rolls on, currents of evil principle, working throughout its various polluted channels, undoubtedly gain amplitude, and increasing strength. New agencies and stimulants of wickedness con-

tinually are arising, and their accumulated pestiferous masses need to be counteracted by superior advancing influences, acting with corresponding potency in an opposite direction. Conspicuous amongst such healthful repelling forces, are those startling discoveries of Himself in the miracles of his power, the Almighty is, at various times, graciously pleased to vouchsafe. Some marvellous region of creation, hitherto shrouded from human ken, is, at the needed moment, unfolded,—fresh the Divine workmanship comes upon us, with all the pristine vigour of a new revelation,—and man's oblivious attention is arrested, and the rising triumph of the scoffer stayed. That which for this purpose might have sufficed for the simple trusting faith of a former generation, has, in mercy, superadded to it this accumulated freshness of potency, for our more faithless, doubting, effete, and inquisitive age.

What, to all human view, would at the present time have been the blighting power of the developed elements of evil, in this country, had the intellectual standard for the last forty years remained stationary among the masses of society, and the human mind been left informed only up to the measure of the close of the last century? Irreligion would, we may believe, have overwhelmed us like a withering storm, and the whole elements of society would have been broken up. And as thus the spread of ordinary

knowledge has acted with silently-countervailing influence amongst the busy multitude, so in like manner the expansion of a wider scientific intelligence has no less effectually exerted a salutary influence over those more cultivated classes, which impart much of the tone and impulse to general society. The philosophers of the present day are not, like too many of a former age, proud in their boast of an empty scepticism. Science has now disclosed *too much* to satisfy a truly enlarged mind with any agency less than Omnipotency; the arcana of Nature have been of late *too widely* laid open to allow any correctly-reasoning powers to ascribe her operations, — so minute, yet so magnificent — so various in action, yet so harmonious in design — to other than an Almighty Architect. The proud and sceptical spirit would seem now to be obliged to succumb under the potency of the Divine Majesty, bearing down upon it from Nature's storehouses on every side; for while the Telescope has brought to view wider and wider ranges of God's empire, and the Microscope has unveiled the most hidden corners thereof; and each and every part has disclosed worlds of creation unknown before — the culminating point has been achieved by the delving instruments of the Geologist. Penetrating with these into the Earth's solid masses, he has manifested that through time past immeasurable, worlds upon worlds of creations have been

evolving upon our own little Globe, and the majesty of the Eternal been displayed on successive surfaces of this Earth during ages long anterior to its traverse by any human footsteps. Man therefore now, in this newly-opened volume, has continually set before him a palpable memorial of the immensity of his God.—“The very stones do indeed cry out,” and speak to him *this voice*. And now, with the mind awakened to the Earth's Archaic history, he cannot walk abroad without having lively conceptions forced upon him of a Power that is Almighty, and a Bountifulness that is beyond thought. The arm of a God is now laid bare above, below, everywhere. The present existences which so richly beautify the Earth's living surface, indeed, “speak His praise” who arrays even the lowly lily with more than the glory of Solomon; but what long-ago-evolved and enjoyed excellencies,—albeit till now unperceived by us,—does not our now living, glowing, alluvial surface cover! Treasured in the Earth's indurate bosom are “Medals of Creation” we may now draw to light, to invigorate, and raise to a loftier strain, our heartfelt adorations. A new sense is, as it were, added by Geology to man, conveying a before-unenjoyed perception of beautiful existences. Scenes previously unappreciated are now, through this newly-opened avenue, happily appropriated; and where we hitherto saw only steril vacuity, there now spring forth to

view bright and monitory things ;—yes! monitors, reproachful to any incipient thought of scepticism, now surround our footsteps. We “hear sermons in stones!” What is now every mountain-range, and swelling hill, that rises before our view? Not as heretofore a mere amorphous mass of senseless rock ; it is a Sanctuary of an Almighty Workmanship, elaborated with a skill inconceivable and sublime, through the revolutions of countless time ! What is now every chasm dipping into the secluded recesses of the fractured earth? Not, as heretofore, a mere empty, rocky cavern, but a fully-tenanted Sepulchre of long-past races of Living Beings, which bespeak a Creator no less Omnipotent than All-wise ! And who thus ruled, with all-controlling energy over the vast epochs and evolutions of these Former Worlds, to gather and pile up these Monumental mountains? And who brought into life, and sustained in being, those countless extinct races of sentient creatures, which thus have laid up, in the bosom of the solid earth, these Reliquial Tablets? It must be the one only Self-existent and Eternal God!—The God with whom we alike have to do ! He it is who “from the beginning hath laid the foundations of the earth,” and the whole sustentation of the varied creations thereof has been the sole “work of His hand.”

How vast, how august, then, is our God ! How utterly unable to be measured are the marvels of his

creative power, by any modern experiences thereof, which the era merely of man's history can supply! How presumptuous then, ever to limit our conceptions of the Divine Omnipotency within its specific operation for mere human exigencies! How faithless and self-injurious not to grasp the commanding influences to be gathered from the even mightier exercises of that Omnipotency upon Creations, in untold time! Any less true and expansive view of the immensity of God's workmanship, would now be no less ineffective than irreverent. We need every available appliance to strengthen the Citadel of Truth against the advancing assaults of a bold and reckless God-despising or God-forgetting multitude. Shall we then cast away from us that panoply of power, supplied in the heart-convincing revelation of worlds upon worlds, created and superseded by the Almighty's hand? This would be for the warrior to enter the battle-field with the freshest, strongest portion of his armour not put on;—the spear of the Goliath of the day may be expected to reach and prevail where the proffered shield of faith is spurned, or only half displayed. What God reveals of Himself he designs that we should not only notice, but should practically employ; and any attempt to circumscribe the practical consideration of the Almighty's doings in the world, to the comparatively petty space of man's existence on its multiplied and ever-shifting stage, may well

call forth the same voice of upbraiding to our presumption, which Job of old had addressed to Him, when he thought to weigh God's ways in his little hand.

“Where wast thou when I laid the foundations of the earth?
Declare, if thou hast understanding.
Who hast laid the measure thereof, if thou knowest?
Or who hath stretched the line upon it?
Whereupon are the foundations thereof fastened?
Or who laid the corner-stones thereof,
When the morning stars sang together,
And all the Sons of God shouted for joy?
And who shut up the sea with doors when it brake forth,
As if it had issued out of the womb?
When I made the clouds the garment thereof,
And thick darkness a swaddling-band for it,
And brake up for it my decreed place,
And set bars and doors,
And said, Hitherto shalt thou come, and no further,
And here shall thy proud waves be stayed?”

3. *Man needs to have placed before him these new and striking monuments of God's immensity, which the wonders of an Ancient Earth display, that he may read thereon the much-forgotten lesson of his own littleness.*

In looking abroad over the face of society, it is too often apparent how utterly inadequate is the influence of those displays of the Almighty's power and majesty reflected from His *ordinary* works, in impressing upon vain man his true position in the scale of being, and rendering him properly humble.

Man, for the most part, walks proudly erect in the midst of God's works, a being of lofty independency, although he is but an atom, fluttering on the breath of an illimitable Omnipotency. He treads this Earth as if all its beautiful abodes were for his alone occupancy, and all its teeming bounties had been created for his sole use, unthinking of other creations above him, and around him, and sepultured in countless myriads under his feet ; all of which might teach his vain-glory a very different lesson. This master-spirit of pride is the great source of man's weakness, —too often of his ruin ; humbled, he would find strength ; and, through lowliness, rise to an unfelt nobleness.

It may be asked, if there is not enough in the regular every-day operations of Nature around him, to awaken man's mind, if he would note these speaking things, to a subduing sense of the ever-present Deity, and manifest to him, in the variety and sublimity of other created works, a humbled consciousness of his own littleness ? But Nature's ordinary book is too patent, too common, to arrest, with any stirring potency, eyes too often blinded to its teachings by their own loftiness. The instructed Poet's eye may indeed, "on insect's wing," or "on rolling worlds," trace "unambiguous footsteps of *The God*," and bend in lowliness beneath the august contemplation—but ordinary Nature is too often a volume unin-

structively read by ordinary minds ; they fail to see a Divinity there, or to discover therein the smallness of their own place, and their own little consequence. But, further, it may perhaps be urged, that even should it so be that Nature in her ordinary, daily operations does thus prove powerless in producing in us a duly humbling influence, yet, that surely a review of the mighty tide of her operations, bounded by the era when mankind began to exist, may be deemed amply sufficient to bring every one to join in lowly exclamation with the Psalmist, when he considered the work of God's fingers, the glorious things which He had created, "*What is man that thou art mindful of him, or the son of man that thou visitest him?*" And there would be, it might be supposed, no necessity to stretch the contemplation backward still beyond the Adamic age for the purpose of instigating in our minds such a due self-subduing comparison. But let it be noted, that all this contemplation of natural objects which is commensurate only with the human race and economy, instructive in subduing influences as it sometimes is, and ever ought to be, is nevertheless still something in which man himself is mixed up, and man appears ever the primary object, and thus in a measure such a view of Nature operates to foster, still, man's own self-importance.

Doubtless there is a tendency in the human mind

to humanize, if it may be so expressed, the Deity, to conceive of Him as a being with human aptitudes, and human passions, or at least as interested, or only chiefly concerning Himself with human affairs; so as almost to engender the vain-glorious conception that God existed for man, as much as man for God. This sadly irreverential and erroneous feeling may, in a great measure, have been occasioned by the accustomed train of thought having led the mind to view the operations of the Almighty as exercised on a theatre only where MAN has governed, and *man* has played the principal part. Amidst the wide expanse of space and action occupied by the world's great drama, man has looked only on a little compressed scene, in which *he always is the hero*; and hence as the pompous hero of a little stage he oftentimes struttingly bears himself. But take the mind now beyond that tiny spot where proud man has existed; let him extend his vision, and be shewn regions of Creation on his own now inherited Earth, which he fondly fancied was ever only his,—where *his* voice nevertheless was never heard, nor *his* footstep known; let him see himself as only one link in a long successive chain of organized living beings;—let there be displayed to him the Deity, not as he had vainly thought, concentrating all his benevolence upon human interests;—but in all the sublimity of his goodness and majesty of his power, exercising

himself in the creation, sustentation, and blessing of countless myriads of living creatures, amongst whom man had no interest, and exercised over them no dominion ; let him be led to behold dispensation after dispensation, and revolution succeeding revolution, evidencing by now-enduring monuments the Almighty's glory, through ages so immeasurable, that the yet passed span of the human epoch is, in comparison of time, but as the dropping grain in the sand-glass, to the vast immensity ; let him see all this—and “ lo ! these are but parts of God's ways”—But let only this extension of view into the variety and vastness of Creation on his own little Globe be entertained, and surely then in this august contemplation man *must* be thrown back upon his own littleness ; and noble though he may be, amidst this crowd of beings, yet must he stand humbled ; must see himself in juster proportions as an atom only in this universal scheme, and falling low before the “ Power Divine” that formed “ these glorious Works” may well in reverence exclaim—

“ Absorbed in that immensity I see,
I shrink abased, and yet aspire to Thee ! ”

And is not this indeed the true view of things which the Earth's undoubted Antiquity unfolds. This Earth is not a scene of a few thousand years only, which man's history has filled up ;—nor is Man the being, who, but for a very fraction of this Earth's

evolutions, has occupied its beautiful localities ; consecutive generations of living creatures have enjoyed in its luxuriant fields their great Creator's bounty, and now in their fossil reliques evidence to us that we are not the exclusive objects of His care ; and thus finding his measurement in a due comparison, man learns a needful lesson—untaught to him with such vividness before,—and his “haughty looks are humbled.”

4. *The fact of the Earth's Antiquity takes away altogether one of the popular infidel objections against the Scheme of Divine Redemption.*

Seeing the Deity exercising, as we do, in times gone by, his goodness and his power irrespective of human concerns, and revelling in the greatness of his might, amid scenes of the Earth's history where man had no place ; we are furnished by this fact with an answer to an argument, which, built upon an unsubstantial supposition, has been advanced in certain quarters, for the purpose of shaking the foundations of the Christian faith. Some of Nature's faithless sons, receiving the grand discoveries of Astronomy respecting the plurality of worlds, have presumed to maintain that such a revelation of Creation's infinitude is quite incompatible with the belief of any special interference on the part of the Maker and Governor of such a vast universe, in behalf of the

inhabitants of this one mere speck of a Globe ; and that the Incarnation of the Deity for the sole recovery of so insignificant a portion of human beings, amidst the immensity of intelligent creatures of like nature peopling other worlds, was a notion altogether inconceivable, and utterly beneath the dignity of the Supreme. This objection has been no less fully than beautifully answered on its own grounds, by a writer of surpassing eloquence¹ ; and its inferences thus clearly shewn to be invalid. But hitherto it has failed to be noticed that the *ground itself*, upon which the infidel objection professes to stand, is destitute of any sure substantial basis ; for looking to the facts revealed from the Earth's Archaic history, the assumption on which it rests appears barely problematical. It is indeed based on one from out of the same large class of man's proud imaginings, which fain would ever connect human beings and human interests with every epoch of time, and every constitution and sphere of the material world—whereas the very Earth on which he lives, in clear voices from her rocky chambers tells him, that it has revolved its circling orb through space, for countless ages, while unnumbered multitudes of other races of beings, unmingled with the human race, occupied its

¹ Dr. Chalmers' *Discourses on Christian Revelation in connexion with Modern Astronomy*.

dwelling-places. Man has seen the bright sun shine on this terrestrial sphere, but as it were a being of yesterday; while its glowing beams have cheered and fertilized other different sentient creatures that have lived thereon, during ages upon ages through untold time. And what reason is there, therefore, for assuming as a certainty, which may barb a withering arrow against the grand Christian verity, that those other brilliant orbs we see floating in the immensity around, although they may be worlds like our own, and withal be filled with organic life, yet must necessarily be inhabited by human beings, in nature and destiny like our own, or even indeed have inhabiting there any *intelligent* Creation at all? Why may they not still be, as we know our own pre-Adamite Earth to have so long been, theatres of Creations, shewing forth their Maker's glory where human kind has no place? It is an assumption altogether,—even if the material constitution of the other planetary orbs should be proved to be the same as our own,—that therefore races like Mankind are dwelling there. It is an assumption, moreover, opposed to the whole analogy of Creation, where variousness of kind is no less conspicuous than the amplitude of their numbers. It is not presumed to assert indeed that such is the constitution of other planetary worlds, to be wanting in races of intelligent beings,—but it shews something worse than

presumption, upon the assumed certainty that such races must be there, to assail the glorious scheme of man's redemption. The majesty of the Eternal is not contracted, but rather is extended, by views of diversified Creations,—the *variety* of the objects of His care, no less displaying the infinitude of His power, than does the largeness of His designs. In all His Works, minute or grand, connected with Human destinies or with the economy of other beings, there is an awful immensity that baffles thought and would ever subdue the soul into lowly adoration, if man, throwing out of view *ever-obtruding self*, would duly consider the Hand that wields the whole universe *for His own glory*, according to the counsel of His own omnipotent will.

5. *But another view of the Earth's Antiquity opens to us a most cheering sense of our own superior privilege, and of our own highly-exalted destiny, amidst the multitude of different eras and various races of creatures therein unfolded to us.*

The contemplation, so rightly humbling, that we are but one amidst a long continuous and diversified series of created Beings, and occupy the period of only a flitting span, but small comparatively in the wide circle of Time's long calendar, has a cheering, grateful ray thrown upon its lowering reflections, by the consideration that, though but a single tribe amongst

many, yet on this single one a destiny immortal has been conferred beyond the rest, and on this our now-existing Epoch, circumscribed though it be amidst the immensity from "the beginning," yet a splendour is imparted, that casts deeply into shade all the other preceding periods—in that the Deity Himself has condescended to walk on this our present heritage of the Earth, and has ennobled human nature above all other natures, by assuming, while sojourning here, the form and fashion of a created man, with his own uncreate Essence.

A favour may be great, and an honour acceptable, when shared even in common with all others; but a favour becomes a privilege, and an honour rises to a distinguished dignity, when a selection is made, and we are enabled to see in ourselves an exalted condition, in comparison with all other creatures. Think, then, how many countless ages have passed away, in the revolutions of the Antique Earth, and no such August Visitant has come as our more recent Earth has witnessed! Think how many countless myriads of living beings have existed in God's various creations, and none, till Man, was created to bear His Maker's Image, and be destined to aspire to His Maker's Presence! The view of human privilege thus opened from the archives of the ancient world, may surely fill the soul with ennobling feelings, with thankfulness, with joy, with adoring service.

How annihilating indeed to everything that is little, mean, and selfish about us, is the contemplation of what we are, in comparison with the indefinite magnitude of the creation, as an image of the infinitude of the Creator! but especially in comparison with the immensity of his love and goodness, as displayed concerning all his creatures; but in respect to man above all, in that having invested himself with the human Essence, he should by that, as a medium, have invested himself with the whole human race, and secured its eternal connexion with himself. While these considerations are annihilating to everything that is little and selfish in our nature, how exalting are they of everything appertaining to us that is truly noble—of that heavenly spark within, by which we have affinity, in our finite degree, with this great Lord and Father of All, and are capable of rising into His glorious image! Compared with the immensity of the creation, and the infinity of the Creator, we, individually, are *nothing*; but considered as having that belonging to us (though all as His gift) in which this Creator can dwell, as either having actually conjunction of life with Him, or, at least, the capacity of attaining it,—of being in Him, as our Redeemer, and He in us,—a reflection of His Majesty irradiates our nothingness; we feel that *in Him* we also are *something*; and although the indefinite greatness of the multitude of His crea-

tures throughout all space and time, may astound us, yet seeing that He has, by the assumption of our nature for our redemption placed us again in a free state of probation, the sense of this infinitude of His power does not diminish, but, rather, increases our confidence, that the Almighty Creator can magnify each of us to the utmost capability of a reception of Himself, belonging to a created being.

Faith therefore, although her brightest rays are doubtless to be sought in something beyond the range of natural religion, yet may she, in part at least, light her cheering torch at the altar of God's immensity, as revealed in the multitudinous tribes of creatures of an Archaic World ; and thus she may, by bringing our race into comparison therewith, furnish us with a supporting sense of superior dignity, and specialty of invested privilege, that well may raise our conscious humbleness from the dust.

6. *The Earth's Antique history presents in another view a grateful sense of God's peculiar providential care for the human race, in the gracious provision manifested throughout all the ancient economies for an after benefit to man.*

This, indeed, is one of the most wonderful and interesting views of the Almighty's material dispensations, that things are not made off-hand as it were, to suit at a moment a particular temporary purpose,

or a present occasion merely, but all are elaborated beforehand, through periods and by evolutions that would appear in themselves to have no immediate connexion with the end ultimately evolved, while each of them nevertheless are in reality independently ministering to that particular purpose ; this is effected by a chain of events long drawn out, it may be, and hidden in many of its links, but still ever held firmly in God's hand and eventually connecting thousands of ages back with the present actual living scene around us. This remarkable harmonious progression in the processes of a wonder-working Providence, the discoveries of the Archaic Earth particularly unfold to view ; and it is a contemplation rich in consolatory thought. Man humbled under a sense of his comparatively recent origin and his comparatively brief occupancy of the Earth, may gather something ennobling and cheering to his self-consideration from a sense of the clearly-manifested forethought by which God would seem to have so arranged all the ancient terrestrial evolutions, that while they ministered to the particular benefit of His then sentient creatures, they should at the same time be so prospectively worked out as to subserve a distant future good specially for the race of mankind, ministering as they now so beautifully do to our present use and blessing.

There surely is something exceedingly grand and

supporting in this large view of the Mundane system under which we live, that "He who seeth the end from the beginning, and from ancient times the things that are not yet done," should, through far distant ages, so prospectively have contrived a long succession of creations, and series of terrestrial evolutions, to suit a now called-for purpose, that were we to suppose an illustrious Being from some other sphere to come on a visit of enjoyment to our world, all things around and about would be found so ingeniously adapted for the special object, that they would appear to his view to have been prepared but the day before by some skilful artificer for his personal use and blessing. Yes! though man was not there himself, the Ancient Earth was one vast laboratory, evolving—while Nature only obeyed her regular laws, and race after race only followed their natural course of generation, yet all along evolving an exhaustless depository of materials and contrivances apparently for *his* special use. The Volcano seems to have heaved of old its convulsed bosom, and the mighty waters to have poured along their ravaging floods, only to place to man's hands the readiest and largest supplies of economic matters for his after-workmanship and blessing. Witness all the various Strata of the Earth's circling crust, though in reality supervening one upon the other, yet by some timely convulsions each having their wide protruding edges brought to

the surface, so as to open each their stores the most readily to man's sight and useful application. Witness the cleavages, the faults, the laminated stratification so wonderfully facilitating the removal of the ponderous rocky masses, and thus rendering them adaptable to the purposes of man's will. Witness the full flowing veins where the precious metals are embedded thus in their close concentration, to be most accessible to man's searching industry and skill. Witness the close proximity of the rich coal-beds, to the treasured masses of the iron ores, thus rendering easy the adaptation of their indurate substances to human purposes. Witness, in short, the whole constitution and disposition of the Earth's richly-varied materials, fitted as they severally are for the growth of our various plants, and for multiplied economical uses. And the whole beautiful arrangement too of its exterior surfaces in hill and dale, lowlands and mountain-ranges, to suit the diversified wants and cheer with their glowing variety the ever-craving eye of man.

Thus the Antique Earth, as being the magnificent sanctuary of God's providential stores, becomes specially to us a Sacred Altar, on which with confiding trust to offer our grateful sacrifices. There, in a peculiar sense, with an ever-growing faith, we may draw near, assured that with special force we shall then have brought home to our hearts God's ever-watchful

ever-interested carefulness for us. In the economies of Ancient time we see Him distinctly revealed as "*Jehovah Jireh*," the providing God. Each now impending rock, each now embedded fossil relique, is a votive table set up in that antique shrine, testifying that "the Lord careth for us." From the granite precipices which now supply the foundations for our edifices, down to the gold and precious stones embedded in its veins, which now represent our wealth or decorate our persons, each stand there a monument of God's providential forethought.

And can it be right that such speaking memorials of an Almighty Providence should bear their lively testimony to eyes and ears unobservant of their cheering record. These unmistakeable testimonies to a wakefulness and care that never slumbers, never fails, might yield to us, in this our now frail, and oftentimes troubled lot, no unimportant solace. That wise, prescient eye, which of old time looked forward with such gracious carefulness, is it not the same that is watching over the path of man's pilgrimage now?—that kind, provident hand, which a-forethought contrived, and laid up then with a skillfulness that is beyond conception, and a bountifulness that is without end, is it not the same which now gives fruitful energy to all Nature's operations, and makes *our* Sun to rise, and *our* fields to yield their precious produce?—When we discover an all-con-

trolling Power in exercise, like an under-current, working its way amidst all the revolutions of worlds rolling through unmeasurable ages, unerringly bringing about the Eternal purposes, and evolving, from the most unlikely circumstances, the mightiest and most gracious effects—shall we be distrustful that “HE, who is the same yesterday, to-day, and for ever,” is now still, through all the world’s present conflicts and wild commotions, making all things to work together for good, according to the kind purposes of His Will. When we see every organized Being throughout the immensity of the ancient creations, all most elaborately constructed to answer, not only their immediate, but, specially, some prospective ends, and the most inert Mollusk, and the minutest Polypi, while furnished with dwellings,—of which the beauty and the skill lavished upon them remains in evidence to this day,—yet all this, with prospective wisdom adapted to our beneficial uses, shall we fear that the same provident Power who contrived thus graciously then, will not much rather contrive for us now? Eras gone by utter then to us these admonishing voices, that, whatever may be our position, we may be assured it is fitted for working out the purposes of God’s good pleasure; and that whatever may be our needs, they are known, and cared for, and will be turned to best account, by His Omnipotent Power;—that no being is too insignificant for

such a Wisdom to use—none too mighty for such an irresistible control to manage. Minuteness cannot perplex, neither can magnificence overwhelm, the Omniscient and the Omnipotent. The “LORD WILL PROVIDE.” This then is the golden inscription ever to be seen emblazoned on the Temple of the Antique Earth.

7. *Another very valuable view derivable from a consideration of the Earth's Antiquity, is the approach it may furnish to some practical conception of Eternity.*

In the unnumbered, vast, revolving eras which have marked their lengthened course on our Globe, we have colossal columns set up, as it were, on the silent track of time, which, measuring out definite periods of immensity, may afford a glimpse, unsupplied by anything before, into eternal durations. There is, perhaps, no contemplation that should be more full of elevating thought, and supply loftier or more commanding influences, than the revelation of the Eternal in connexion with the Eternity He essentially inhabits. But the very vastness and incomprehensibility of such a conception enervates its power to produce a practical influence. The human mind shrinks back, untouched, by the unapproachable idea. Hence the thought of Eternity, in itself so awful, so full of power, dwindles, for all moral purposes, into a mere abstract notion—a word—a

sound—conveying little definite sense, or practical impression to the mind. True it is, indeed, that no effort, however well assisted, and no intelligence, however highly exercised, can possibly give any just conception of *Eternity* to a being of *time*;—any idea of the *infinite*, to a *finite* mind. This is equally true of all the Divine attributes, and their concomitants; they all must elude the grasp of any human capacities: we cannot possibly scan them; their fulness and entirety no mortal powers can comprehend; but still we may, and do gain, by analogy, certain shrouded glimpses of them; we may catch and mark some reflected rays of their glory; and this we are commanded and encouraged by God himself to do; and thus, though through a veil, approach to some knowledge of Him. But for this Eternity, so specifically essential in the Deity, there seems hitherto to have been no such assisting medium of conception available, nothing to render it a tangible idea, even in any degree approachable. It was an essence of infinitude, of which there was not even a partial chronometer; it stood unmeasurable, even over one brief line of its circling amplitude. But may not the far-stretching annals of the Antique Earth, affording such lofty conceptions as they do of time's long duration, furnish, in some sense, an emblematic scale for approaching the idea of this boundless eternity? Not that for a moment it is to be

supposed, that the Earth's Antiquity, carried back as far as the loftiest speculation could imagine, can penetrate to that eternal abyss, — unapproachable and unknown to all, save to the Self-Existent, Eternal alone ! That ancient period, however far receding back into time it may go, when “in the beginning God created the Heaven and the Earth,” must, in reality, date as far from Eternity itself as comparatively would do a thing of yesterday ;—but still when we can mark from ancient epoch to epoch ; from antique creation to creation ; from long-evolved evolution to evolution ; all traceable in their lengthened courses by indelible lines, and by well-defined monuments in the enfolding crust of the Earth, and in those traceable revolutions see written out, with a distinctness not to be mistaken, durations of inconceivable magnitude, stretching backward into regions of time, that would defy the power of any attempt to the shadow of a computation ; when thus, we have revealed to us such deep revolving periods of marked and sure immensity ; we are supplied with an ideal indicator, feeble though it be, which may nevertheless furnish some definable semblance for an approaching conception to the everlasting continuity of eternal ages.

We allow, with delight and with instructiveness, a like process of comparative computation to furnish us with a measure by which we have been enabled

to form some conception of the before unapproachable idea of boundless space. Anterior to the period when Astronomy had discovered systems of worlds in every glittering star, what was the notion of *space* to us but an undefined abstraction? but now its wide circling amplitude is in a degree recognizable to our feeble sense. Science with her potent instruments has scaled those towering heights; she has calculated each mile of distance from Luminary to Planet; and from Planet to fixed Star; and from fixed Star to the very twinkling Orbs; till her advancing strides are stopped only at the glimmering points of the shrouded Nebulæ. And all this with such a wondrous exactitude, that opens a surely-measured pathway through the very depths of the universe to our gaze. And now no longer is boundless Space an abstract notion, it approaches to a defined conception; we still indeed arrive, not at any full idea of its infinitude, that is impossible; but we do gain an approach towards it; we step from star to star, from one system of worlds to another rolling on in the wide amplitude of its circumambient sphere, and thence collect some semblance of magnitudes indicative of its full immensity. And this is something,—it is much indeed towards elevating our minds, and enabling us higher and higher to rise in adoration to HIM who sits enthroned in this all-spacious infinitude, and governs all it contains. Now it is this

same process which has thus been made available to furnish some conception of the spheres of Space, we here claim to apply for affording a conception of the sphere of Eternal Durations. We would measure off by it a certain inconceivably lengthened recognizable period, and thus by a tangible comparison gain a glimpse of the whole wide-circling span. Now the chronology which dates back only to the brief number of years forming the epoch of man's recent history, is totally inadequate for so vast a purpose ; what is a mere six thousand years towards approaching a conception of an eternity ? It is like attempting to measure out the ocean with a nutshell ; but that brief recent chronology is very valuable, nevertheless, for measuring the probable durations of the antecedent multitudinous eras that have passed on the ancient Earth, and thence to supply a less futile computer ; for when we see in the operations of Nature, now passing daily before us, how slow, how very gradual is her step, how long her processes are evolving ; and when we see in the races of created organized life now existing, the long period of allotted being appertaining to the respective tribes,—not one of which have yet become extinct in the six thousand years they have been on the earth,—we then apply this present scale of Nature's prolix doings to her like natural operations in ancient ages, it becomes our measuring line, our chronometer, to

approximate thereby to some computation of the durations of receding time through those untold Epochs. We step with it from formation to formation, from rock to rock, from strata to strata, from creation to creation, from epoch to epoch, from terrestrial revolution to revolution, till we arrive at the period of the indurate granite, and there find, as it were, the very herculean pillars of the globe, bounding the regions of time to our view. And all these preceding eras of vast duration, through which we thus in Nature's Archaic regions have travelled, swell into that immensity of *conceivable* period which furnishes the semblance of analogy we need for that period which is *inconceivable*. And Eternity hence receives its only tangible conception, as dimly thus reflected from the magnificent sepultured ruins of an Antique Earth.

And does the Earth's Antiquity supply no moral uses in thus reflecting a faint shadow of infinite durations? Is the idea of eternity commonly so conceivable, so duly influential, that benefit may not be gained by some medium through which we may approach its infinitude more tangibly? It needs to take that definite position in our minds proper for filling up, in some due degree, our conception of the Deity. It needs to be brought to act with more practical force on our estimate of time present, and on the certainties of time future. To know God is

the first step in religion ; and is not HIS ETERNITY one of the most essential attributes of his Being ? It is that indeed in which he delights to make himself known ; “ *I am that I am* ” is his own revelation of his sublime existence ; and truly if this attribute were duly followed out, in its high and holy consequences of interest and awe, we should ever with the Cherubim veil our faces in reverence before this Ancient of days, and adore his excellent Majesty. But practically the impression of God’s majestic nature is weak, because the idea of His eternity is so very indefinite ; our dull senses need a comparison which may bring to us a shadow of its infinitude. If this is to be found anywhere, it is in the unfathomable durations of the Ancient Earth : penetrating into these deep, but still somewhat definable shades, and seeing the Creator acting throughout such immense periods ; the duration of the Eternal himself is less abstractedly conceived of ; and the mind has something to rest upon when carried back to the *beginning* of all these ancient works ; it is led to say, “ Before the mountains were brought forth, or ever thou hadst formed the earth and the world, even from everlasting to everlasting, Thou art God ! ”

Eternity is further evidently revealed to us in order to bring into more marked view the poor frail fleeting nature of our present periods of existence ; but the contrast of our brief lives with eternal ages is

oftentimes felt to be too wide a comparison for ready practical application ; it wants an intermediate step to give it more appreciable force. Man frets and is anxious concerning this little speck of life, as if its period were some great matter : but what is the whole threescore years and ten ? what the long existences even of the Antediluvian Patriarchs, when brought into computation with antecedent periods of ancient creations that have had their living day on this our Globe, involving as their reliques would seem to shew, ages where we now number moments ? How insignificant then must our petty term of days be when compared with the depths of Eternity itself ! With the long durations of the ancient eras before us, to substantiate in some measure what that Eternity is, we may now better conceive our life to be indeed a span, a fleeting dream, a shadow, a flickering breath.

But this Eternity to which our conceptions are thus, in the awful depths of its past receded course, carried back by the revealed long durations of the Earth's Antiquity, is by the same measurements of Archaic periods, to our minds rendered more conceivable also in the equally awful depths of its forward extension. Everlasting ages to come are not now altogether a cloudy unappreciable abstraction, faithfully believed in indeed, but totally in idea inconceivable and obscure. There has been an embodied

reality, as it were, of unmeasurably-long durations, in the immensity of the Earth's anciently-revolved past—the vision of the unmeasurable future is not now, therefore, without a definable figure of its illimitable duration,—a figure that may dimly shadow it forth. Thus the finite human mind gains confirmation concerning the *eternal past*, and faith in the *eternal future*, from the Earth's archaic revelations.

8. *There is one other practical use which may be mentioned as deducible from the revelation of the Earth's Antiquity, in that manifestation of continuous change and transformation therein unfolded to us, as the governing principle of all the Divine operations in the material world.*

Man in the tenacity with which he clings to present interests, and the circumscribed view he takes of Nature's works, is apt to fancy that *stability* is the grand foundation of his happiness, and of the world's well-doing; hence the changeful condition of all terrestrial things is, at times, regarded as a blot on fair Nature's course, and the dispensation of decay under which we live, a defect in the human economy. How fretful therefore is he oftentimes "amidst the changes and chances of this mortal life!" How ready in his blindness to call in question the Divine Wisdom in their visitation! But when we take that expansive view over the wide field of the Divine

operations which the annals of the Antique Earth may specially supply, we find this very principle of change displayed as the grand conservative principle of the World. Yes ! change, continual change, is *the rule*—stability, if anywhere it can be found, the *exception*. All is in a continual state of transformation, all things in a constant round of revolutions ; one object formed out of another object, and that yielding itself up to a third ; one Being giving place to another Being which only prepares the path for a successor. Indurate mountains, no less than fluid oceans ; whole creations, no less than single individuals ; epochs of worlds, no less than days, months, and years ; all exist only in transition, all undergo perpetual change. But one alone object there is, that in the midst of this universal mutation and decay, stands ever-stable, ever-living, ever the same—it is the Grand Ordainer and Governor of these everlasting revolutions.

“ They shall perish, but thou remainest ; and they all shall wax old as doth a garment ; and as a vesture shalt thou fold them up, and they shall be changed ; but Thou art the same, and Thy years shall not fail.”

We may rest assured, therefore, that since THE EVERLASTING thus revolves all these changes around his eternal throne, this economy of mutations is the true vivifying principle of material existences, evolv-

ing the greatest portion of good God's Creations are capable of enjoying ; and not perpetuity therefore, but ever-recurring *change*, is thus the grand conservative and controlling regenerator of the universe.

And how magnificent is the view of the Divine economy of the world which is opened to us in the revelation that this is so ! To see the whole elements of universal nature, the same from "the beginning," but moulded, and perpetually remoulded, by the plastic hand of Omnipotence into those infinite varieties of organic and inorganic existences, which all along have decked with such beauty and grandeur this teeming Earth. To view this present system of the World, not as an isolated independent Creation, but one of a mighty series, which have evolved, under the Great Creator's governance, through countless ages ; and, for aught we know, will evolve under new conditions of His Will, for countless ages more. To view the diversified races of living creatures, that walk the earth, and swim the sea, and fill the air ; not as having nought alike before them, or anything similar probably to come after them ; but as forming, in their united tribes, a mere link in the illimitable chain of Beings that has been gradually unfolding from "the beginning" by the Hand of Him who filleth every portion of space, and we may believe will, also, every period of time, with his living Creations ;—to view, in short, all races of beings, and all economies of things, as ever having followed, as to

their material substances, and ever now following this universal law,—*to be only in a transition state*, dying to be revived again, decaying only to be transformed ;—this surely is a conception of the long-enduring Universe that is at once grand in itself, and no less full of interesting consequences.

This ordained principle of destruction and renovation intimately connects all the economies of the World together into one grand system ; and the present condition of our Globe becomes but a single version in that magnificent revolution of universal Nature which encircles all Time, backward and forward, in one vast combined embrace ; for while tracing the action of this principle through days of old, our glance is led to a like exemplification of its action in periods to come, to see in them also the operation over material things, of the same vivifying laws of reproduction from decay, of revival from their change.

Thus indeed from the past and the present we may obtain a shrouded vision of the coming future, and dimly may anticipate its destiny. As revolution has hitherto followed revolution on the Earth's surface, and new economies of the World have invariably followed each other, giving place to new creations through such long vistas of time, what ground have we for concluding that these revolving manifestations of God's power are about to cease ? and that the *present* economy of the human race is to close up God's visible material workmanship on

this Earth? We yet trace no old age in Nature, no decay of vigour in any of her operations, nor any faltering in the continuous action of her laws. What reason have we to suppose that her work will soon be over, or the high function she has so long fulfilled in the manifestation of the Almighty's glory come to a close? True it is, indeed, that we are called upon, in the future course of her destiny, to expect that one of those grand convulsive catastrophes will surely occur, of which the Earth in her deep-folded crust bears already the traces of so many. That such shall, in the coming hereafter, be so, would seem to be the clear testimony of God's Word. This now existing World has yet to undergo one of her most searching and convulsive throes—" *When the heaven and the earth that now are, being kept in store, reserved unto judgment, shall pass away with a great noise, and the elements shall melt with fervent heat, the Earth also and the works that are therein shall be burned up—nevertheless*"—it is added, and it is an addition bearing with much weight upon the continuity of the system God has hitherto carried on throughout his material works—" *Nevertheless we, according to his promise, look for new heavens and a new earth, wherein dwelleth righteousness.*"—And a like revelation is made in the Apocalypse, where after in highly figurative language describing the dissolution of the present dispensation of things, the same prophetic figurative voice proceeds to represent

the coming down from God of the emblematic "New Jerusalem," saying, *I saw a new Heaven and a new Earth, for the first Heaven and the first Earth had passed away.*

Thus then in furnishing these several practical deductions, which have now been brought forward, the fact of the Earth's Antiquity may be regarded as no barren speculation unfruitful in Moral Uses. The Oracles of this Antique Temple utter indeed no ambiguous uninformative voices. Whatever the foretold awful future changes of this terrestrial Globe may portend—and the event alone can fully solve this mystery—yet whatever may betide this earthly Sphere, man, in contemplating the grand and gracious mundane system to which he belongs, may see himself surrounded with ample supports to animate an ennobling faith, and work out a glorious destiny. He looks to the harmony manifested between the recent revelation of an Archaic Earth and the anciently-written revelation of the Creation, and in the disclosure now of this long-shrouded accordance gains a refreshed sense of the Inspiration of the Sacred Word, which gives to his faith vigour, and to his obedience a commanding sway. He looks again to the revealed evolutions of an Ancient Earth, and there beholds vivid evidences of an Omnipotency that brings the God of countless ages, and of infinite series of creations, in irresistible freshness before him

as *his* ever-present God, able *now* as *then* to support and control all things by His Almighty arm. Turning then to trace the interminable races of Living Beings the Archaic Earth unfolds to view, all having flourished and acted in turn their allotted parts on the world's wide stage, he has his own proud imaginings of an exclusive occupancy and an exclusive Divine care laid low, and he is brought to feel the due level of his own single race amongst the many and mighty masses of terrestrial existences. But in the midst of this properly-induced lowliness—brought home by the overwhelming contact of other Beings—his spirit is justly elevated, by the exalting contrast of his own superior privileges on the Earth, over all the ancient races of living creatures, standing there as he does the noblest of God's works, capable even of bearing his Maker's Image, in prelude to a participation in His Glory. And cheered moreover he further may be, when glancing into all the long and mighty evolutions of the Antique World, he sees them all prospectively arranged for his own present beneficial use, manifesting that there is, ruling over all, a Providing God ready for all his necessities. And then, although overwhelmed he may be by the long receding epochs of time the immeasurable eras of the Archaic Earth lay open to view, yet in those long durations he catches a shadow which gives some conception to his mind of that awful Eternity which is the essence of the August Deity, and is indeed the

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enduring destiny to which his own indestructible spirit is taught to aspire. And lastly, while he sees ever succeeding change and transformation stamped as the actuating principle throughout the Earth's Antique History, he with renovated faith, feels in the very mutability of the condition of himself and all things around him, how thus he is indissolubly linked with that all-continuous system of decay and restoration which the Great Governor of all eras and all existences is ever evolving for the universal good.

Thus tracing the mysteries of his destiny through all the revealed wonders of the receded past, and all the shadowed-out visions of the coming future, Man finds the living present richly filled with motives for adoration, for thankfulness, for submissive service. He remains, while all is in movement and transition around him, a Being of exalted faith and lofty anticipation. The Earth's Antiquity nobly supports his confidence in a glowing futurity, and prompts his actual footsteps to an elevated course of action; and thus, amidst the World's vicissitudes and Life's most fearful troubles, he is firm, he is undismayed, and may ever, while journeying trustfully

"On earth's sepulchral clod,
The darkening universe defy
To quench his immortality,
Or shake his trust in God."

THE END.

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